2025 Annual Water Quality Report

(Testing Performed January through December 2024)

UTILITIES BOARD OF THE TOWN OF GROVE HILL

PWSID AL0000255

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We are pleased to present to you this year's Annual Water Quality Report. This report includes important information on our water sources, results of water analyses, plain language definitions, and other important information about water and health. We work diligently to provide high quality water that meets or exceeds State and Federal drinking water standards.

Water Source	Four (4) groundwater wells producing from the Miocene aquifer (Wells located on: Court St, 4th Ave, Grove Hill Ave, & US Hwy 84)
Water Treatment	Chlorination and corrosion control
Storage Capacity	Four (4) tanks with a capacity of 1,050,000 gallons
Inter-Connections	Sell to Jackson Water Works
Number of Customers	Approximately 1760
Board Members	Gene Pritchett, Chairman
	Phyllis Barnes, Co-Chairman
	Shea J. Skipper, Secretary
	Daniel Fendley
	Bradley Paul
	Lanessa Pugh
	John W. Reid
Superintendent/Certified	Franklin Kyle McIntyre

Source Water Protection

In compliance with the Alabama Department of Environmental Management (ADEM), the Utilities Board of the Town of Grove Hill has developed a Wellhead Protection Plan that assists in protecting our water sources. This plan provides information such as potential sources of contamination. It includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. The assessment was performed, public notification was completed, and the plan was approved by ADEM. A copy of the report is available in our office for review during regular business hours with prior request.

We routinely perform water storage facility inspections, and we utilize a Bacteriological Monitoring Plan. Chlorine residual is monitored closely within the distribution system. We have adopted a Cross-Connection Control Program for the purpose of detecting and preventing a danger to public health from cross-connection contamination.

Please help us make these efforts worthwhile by doing your part to help protect our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints, and waste oil.

Health Information about Lead

As required by ADEM, we conducted a Lead Service Line Inventory during 2024, and it was concluded that our system contains no known lead service lines. Of the 2,041 service lines in the system, 117 lines are galvanized requiring replacement, and the material classification is unknown in 194 lines. The Lead Service Line Inventory report and results from our latest Lead results are available for review in our office upon request.

Lead is rarely found in source water but is primarily from corrosion of materials and components associated with home plumbing. Your water system is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. As required by federal and state agencies, we utilize an outside laboratory to analyze the samples we monitor for Lead. Even though we have not had a problem with Lead in our distribution system, the following information about Lead is required to be in this report. If present, elevated levels of Lead can cause serious health problems, especially for pregnant women and young children. The Environmental Protection Agency (EPA) and the Center for Disease Control (CDC) make the following recommendations:

- Before using any tap water for drinking or cooking, flush your water system by running the kitchen tap (or any other tap you take drinking or cooking water from) on COLD for 1–2 minutes. Flushing can minimize the potential for lead exposure, especially if the water has been sitting undisturbed for several hours, as in overnight.
- In all situations, especially for making baby formula, drink or cook only with water that comes out of the cold tap. Warm or hot tap water is more likely to cause lead to leach from plumbing materials.
- Periodically remove the aerator on the tip of the faucet and wash out any debris such as metal particles.
- Remember - Boiling will NOT reduce the amount of lead in your water.

The actions recommended above are likely to be effective in reducing lead levels because most of the lead in household water comes from household plumbing materials. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from www.epa.gov/safewater or by calling the EPA Safe Drinking Water Hotline at 1-800-426-4791.

Drinking Water Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the levels of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and it can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Radon can move up through the ground into a home through cracks and holes in the foundation. It may also get into indoor air when released from tap water. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home consider having the home tested. Testing is easy and inexpensive. For more information call EPA's Radon Hotline at (800-SOS-RADON).

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Questions?

If you have any questions about this report or concerning your water utility, please contact Kyle McIntyre at 251-275-3153. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first Monday of each month at 4:30 p.m. at Town Hall located on 111 South Church Street.

More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

Monitoring Schedule and Results

Utilities Board of the Town of Grove Hill *routinely* monitors for constituents in your drinking water according to Federal and State laws. The Alabama Department of Environmental Management (ADEM) allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants was not required.

Constituents Monitored	Date Monitored
Inorganic Contaminants	2022
Lead/Copper	2024
Microbiological Contaminants	current
Nitrates	2024
Radioactive Contaminants	2020
Synthetic Organic Contaminants (including herbicides and pesticides)	2022
Volatile Organic Contaminants	2023
Disinfection By-products	2024
PFAS Contaminants	2024
Water Quality Parameters Contaminants (Corrosivity Characteristics)	2024

TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	**Violation Y/N**	**Level Detected**	**Unit Msmt**	**MCLG**	**MCL**	**Likely Source of Contamination**
Alpha emitters	NO	Annual Avg 1.85 (1.03-2.66)	PCi/l	0	15	Erosion of natural deposits
Combined radium	NO	Annual Avg 0.78 (0.48-1.01)	PCi/l	0	5	Erosion of natural deposits
Barium	NO	0.017-0.026	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	NO	0.56 [1] (0.0048-1.3)	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	NO	0.0023 [2] (ND-0.021)	ppm	0	0.015	Erosion of natural deposits
Nitrate (as Nitrogen)	NO	0.65-1.2	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM-Total trihalomethanes	NO	1.20-1.40	ppb	0	80	Byproduct of drinking water disinfection with chlorine.
Unregulated Contaminants						
Chloroform	NO	ND-1.10	ppb	70	none	Naturally occurring; industrial discharge or agricultural runoff
Secondary Contaminants						
Chloride	NO	4.33-6.58	ppm	n/a	250	Naturally occurring; industrial discharge or agricultural runoff
Hardness	NO	8.80-10.8	ppm	n/a	n/a	Naturally occurring; treatment with water additives
pH	NO	6.30-6.73	S.U.	n/a	n/a	Naturally occurring; treatment with water additives
Sodium	NO	2.03-3.65	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	0.51-1.18	ppm	n/a	250	Naturally occurring; industrial discharge or agricultural runoff
Total Dissolved Solids	NO	ND-140	ppm	n/a	500	Naturally occurring; industrial discharge or agricultural runoff

[1] Figure shown is 90th percentile of latest round of sampling, and number of sample sites exceeding the Action Level (1.3 ppm) = 0
[2] Figure shown is 90th percentile of latest round of sampling, and number of sample sites exceeding the Action Level (1.3 ppm) = 0

PFAS: Below is a list of PFAS contaminants for which our system monitored in 2024 and the results of that monitoring expressed in parts per billion (ppb). For more information on PFAS contaminants, please consult *https://www.epa.gov/pfas*.

PFAS Contaminants (ppb)									
Abbreviation	**Contaminant**	**MCLG**	**MCL**	**Detected**	**Abbreviation**	**Contaminant**	**MCLG**	**MCL**	**Detected**
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	--	--	ND	PFDoA	Perfluorododecanoic acid	--	--	ND
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	--	--	ND	PFHpA	Perfluoroheptanoic acid	--	--	ND-0.0041
ADONA	4,8-dioxa-3H-perfluorononanoic acid	--	--	ND	PFHxS	Perfluorohexanesulfonic acid	0.010	0.010	0.0028-0.013
HFPO-DA	Hexafluoropropylene oxide dimer acidA	0.010	0.010	ND	PFNA	Perfluorononanoic acid	0.010	0.010	ND
NEtFOSAA	N-ethylperfluorooctanesulfonamidoacetic acid	--	--	ND	PFOS	Perfluorooctanesulfonic acid	0	0.004	0.0047-0.019
NMeFOSAA	N-methylperfluorooctanesulfonamidoacetic acid	--	--	ND	PFOA	Perfluorooctanoic acid	0	0.004	0.0024-0.0059
PFBS	Perfluorobutanesulfonic acid	--	--	ND-0.0052	PFTeDA	Perfluorotetradecanoic acid	--	--	ND
PFDA	Perfluorodecanoic acid	--	--	ND	PFTrDA	Perfluorotridecanoic acid	--	--	ND
PFHxA	Perfluorohexanoic acid	--	--	0.0022-0.0065	PFUnA	Perfluoroundecanoic acid	--	--	ND
						Total PFAS			0.012-0.051

Note: In April 2024, the EPA finalized a Primary Drinking Water Regulation establishing individual MCLGs and MCLs for five (5) PFAS contaminants in drinking water. PFOA, PFOS, PFHxS, PFNA, & HFPO-DA. Mixtures containing 2 or more of PFHxS, PFNA, HFPO-DA, & PFBS were assigned MCL of 1 (unitless) Hazard Index.

Corrosivity Characteristics: Water Quality Parameters			
Contaminants (Distribution)	**Violation Y/N**	**Range**	**Unit of Msmt**
Alkalinity, Total (as CaCO3)	NO	ND-13.4	ppm
Calcium (as Ca)	NO	1.6-2.4	ppm
Carbon Dioxide, free	NO	5.3-18.1	ppm
pH (field)	NO	7.1-7.8	pH units
Specific Conductance	NO	37.8-58.6	µmhos/cm
Temperature (field)	NO	64.0-68.0	ºC

Reporting Non-compliance

The Grove Hill Water Works has incurred a volatile organic chemicals (VOC) reporting non-compliance. The non-compliance resulted from a failure to submit the January 2020 - December 2022 VOC results to ADEM by January 10, 2023. ADEM Admin. Code r. 335-7-2-.20(1)(a) states, "the supplier of water shall report to the Department the results of any test, measurement or analysis within the first 10 days following the month in which the result is received or the first 10 days following the end of the required monitoring period as stipulated by the Department, whichever is shortest."

The VOC contaminants were monitored in the correct time period, and the results were uploaded to ADEM by the laboratory on time; however, there was a problem with the electronic submittal and the results were rejected. Your drinking water quality was not adversely affected by the late reporting. If it had been, we would have notified you immediately.

Should you have any questions concerning this non-compliance or our monitoring requirements, please contact Kyle McIntyre at the water office at 111 South Church Street in Grove Hill or by phone at 251-275-3153.

Copper Action Level Exceedance and Corrosion Control Study

The copper Action Level of 1.3 mg/L was exceeded for the monitoring period of January 2024 - June 2024. The sampling consisted of 40 samples collected during June 2024 in different parts of the distribution system service area. Copper results ranged from 0.012 mg/L to 6.5 mg/L. The 90th percentile copper level for samples collected on May 22, 2024 was 4.18 mg/L. The water system had a similar exceedance during the July to December 2023 monitoring period. These exceedances were not MCL violations but triggered the need for the water system to take corrective actions, including the following: sample all sources for lead and copper and three distribution sites for water quality parameters on two separate days, to submit a Corrosion Control Study, install and maintain adequate corrosion control treatment, and to continue to monitor 40 sites every 6 months to determine if the Corrosion Control Study modification to their treatment is effective.

We performed the extra required monitoring of all sources and three distribution sites for water quality parameters on two separate days, as well as water quality parameters. We performed lead and copper monitoring for June – December 2024, and none of our sample sites exceeded the copper Action Level. We had already installed and maintained corrosion control treatment; however, we worked with our chemical supplier to modify the corrosion control treatment being used to better control the copper levels. We hired an engineer to assistance with the Corrosion Control Study.

The findings of the Corrosion Control Study are summarized here: Grove Hill has been using a blended phosphate corrosion inhibitor for a number of years with no issues. Grove Hill increased the feed rate to achieve an increased level of phosphates in the Mid-Clarke System, and the copper levels in the Mid-Clarke system actually increased. Samples were taken from all four wells in Grove Hill, and it was determined that the copper in the system is not coming from the wells.

Grove Hills’s blended phosphate supplier recommended the product Carus 8700, and there has already been a reduction in the copper levels at the sample points. It is our intention to continue to use the corrosion inhibitor, and to sample to verify that the copper levels are in an acceptable range. We will continue to monitor our original 40 sites every six months until it meets the action level for two consecutive six month periods.

I Should you have any questions about the copper exceedances, please contact Kyle McIntyre at the water office at 111 South Church Street in Grove Hill or by phone at 251-275-3153.

Plain Language Definitions

Action Level: the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.
Coliform Absent (ca): laboratory analysis indicates that the contaminant is not present.
Detected contaminant: any regulated or unregulated contaminant detected at or above its method detection limit (or reportable limit)
Disinfection byproducts (DBPs): formed when disinfectants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water.
Hazard Index (HI): used to determine health concerns associated with mixtures of certain PFAS in finished drinking water. An HI greater than 1 requires a system to take action.
Maximum Contaminant Level (MCL): highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal (MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Micrograms per liter (ug/L): equivalent to parts per billion (ppb) since one liter of water is equal in weight to one billion micrograms.
Microsiemens per centimeter (µs/cm): unit of measurement for Specific Conductance.
Milligrams per liter (mg/L): equivalent to parts per million
Millirems per year (mrem/yr): a measure of radiation absorbed by the body.
Nephelometric Turbidity Unit (NTU): a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
90th Percentile: The values reported for lead and copper represent the 90th percentile.
Not Detected (ND): laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.
Parts per billion (ppb) or Micrograms per liter (µg/l): corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Parts per million (ppm) or Milligrams per liter (mg/l): corresponds to one minute in two years or a single penny in $10,000.
Parts per quadrillion (ppq) or Picograms per liter (picograms/l): corresponds to one minute in 2,000,000,000 years, or a single penny in $10,000,000,000,000.
Parts per trillion (ppt) or Nanograms per liter (nanograms/l): corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.
Picocuries per liter (pCi/L): a measure of the radioactivity in water.
Regulated Contaminants: contaminants for which the EPA has established drinking water standards.
Running Annual Average (RAA): running average of results during a specific sampling period, often a year.
Standard Units (S.U.): pH measures the water's balances of acids and bases.
Treatment Technique (TT): a required process intended to reduce the level of a contaminant.
Unregulated Contaminants: contaminants for which the EPA has not established drinking water standards.
Variances & Exemptions (V&E): State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Below is a table of contaminants for which we monitor as required on a schedule set by the Environmental Protection Agency and the Alabama Department of Environmental Management.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS

Contaminant	MCL	Unit of Msmt	Detections
Bacteriological Contaminants			
Total Coliform Bacteria	<5%	Present or absent	absent
Fecal Coliform and E. coli	0	Present or absent	absent
Turbidity	TT	NTU	
Cryptosporidium	TT	Calc.organisms/l	
Radiological Contaminants			
Beta/photon emitters	4	mrem/yr	ND
Alpha emitters	15	pCi/l	1.03-2.66
Combined radium	5	pCi/l	0.48-1.01
Uranium	30	pCi/l	ND
Inorganic Chemicals			
Antimony	6	ppb	ND
Arsenic	10	ppb	ND
Asbestos	7	MFL	ND
Barium	2	ppm	0.017-0.026
Beryllium	4	ppb	ND
Cadmium	5	ppb	ND
Chromium	100	ppb	ND
Copper	AL=1.3	ppm	0.0048-1.3
Cyanide	200	ppb	ND
Fluoride	4	ppm	ND
Lead	AL=15	ppb	ND-0.021
Mercury	2	ppb	ND
Nitrate	10	ppm	0.65-1.2
Nitrite	1	ppm	ND
Selenium	.05	ppm	ND
Thallium	.002	ppm	ND
Organic Contaminants			
2,4-D	70	ppb	ND
Acrylamide	TT	TT	ND
Alachlor	2	ppb	ND
Benzene	5	ppb	ND
Benzo(a)pyrene [PAHs]	200	ppt	ND
Carbofuran	40	ppb	ND
Carbon tetrachloride	5	ppb	ND
Chlordane	2	ppb	ND
Chlorobenzene	100	ppb	ND
Dalapon	200	ppb	ND
Dibromochloropropane	200	ppt	ND
1,2-Dichlorobenzene	1000	ppb	ND
1,4-Dichlorobenzene (para)	75	ppb	ND
o-Dichlorobenzene	600	ppb	ND
1,2-Dichloroethane	5	ppb	ND
1,1-Dichloroethylene	7	ppb	ND
cis-1,2-Dichloroethylene	70	ppb	ND
trans-1,2-Dichloroethylene	100	ppb	ND
Dichloromethane	5	ppb	ND
1,2-Dichloropropane	5	ppb	ND
Di (2-ethylhexyl)adipate	400	ppb	ND
Di (2-ethylhexyl)phthalate	6	ppb	ND
Dinoseb	7	ppb	ND
Dioxin [2,3,7,8-TCDD]	30	ppb	ND
Diquat	20	ppb	ND
Endothall	100	ppb	ND
Endrin	2	ppb	ND
Epichlorohydrin	TT	ppb	ND
Ethylbenzene	700	ppb	ND
Ethylene dibromide	50	ppb	ND
Glyphosate	700	ppb	ND
Heptachlor	400	ppb	ND
Heptachlor epoxide	200	ppb	ND
Hexachlorobenzene	1	ppb	ND
Hexachlorocyclopentadiene	50	ppb	ND
Lindane	200	ppb	ND
Methoxychlor	40	ppb	ND
Oxamyl [Vydate]	200	ppb	ND
Polychlorinated biphenyls	0.5	ppb	ND
Pentachlorophenol	1	ppb	ND
Picloram	500	ppb	ND
Simazine	4	ppb	ND
Styrene	100	ppb	ND
Tetrachloroethylene	5	ppb	ND
Toluene	1	ppb	ND
Toxaphene	3	ppb	ND
2,4,5-TP(Silvex)	50	ppb	ND
1,2,4-Trichlorobenzene	.07	ppb	ND
1,1,1-Trichloroethane	200	ppb	ND
1,1,2-Trichloroethane	5	ppb	ND
Trichloroethylene	5	ppb	ND
Vinyl Chloride	2	ppb	ND
Xylenes	10	ppb	ND
Disinfection Byproducts			
TTHM [Total trihalomethanes]	80	ppb	1.20-1.40
HAA5 [Total haloacetic acids]	60	ppb	ND

LIST OF SECONDARY CONTAMINANTS

Alkalinity, Total (as CA, Co_3)	Copper	Manganese	Specific Conductance
Aluminum	Corrosivity	Odor	Sulfate
Calcium, as Ca	Foaming agents (MBAS)	Nickel	Total Dissolved Solids
Carbon Dioxide	Hardness	pH	Zinc
Chloride	Iron	Silver	
Color	Magnesium	Sodium	

LIST OF UNREGULATED CONTAMINANTS

Aldicarb	Chloroethane	Hexachlorobutadiene	Propachlor
Aldicarb Sulfone	Chloroform	3-Hydroxycarbofuran	N-Propylbenzene
Aldicarb Sulfoxide	Chloromethane	Isoprpylbenzene	Propachlor
Aldrin	O-Chlorotoluene	p-Isopropyltoluene	1,1,1,2-Tetrachloroethane
Bromoacetic Acid	P-Chlorotoluene	M-Dichlorobenzene	1,1,2,2-Tetrachloroethane
Bromobenzene	Dibromochloromethane	Methomyl	Tetrachloroethene
Bromochloromethane	Dibromomethane	Methomyl	Trichloroacetic Acid
Bromodichloromethane	1,1-Dichloroethane	Methylene chloride	1,2,3-Trichlorobenzene
Bromoform	1,3-Dichloropropane	Methyl tert-butyl ether	Trichloroethene
Bromomethane	2,2-Dichloropropane	Metolachlor	Trichlorofluoromethane
Butachlor	1,1-Dichloropropene	Metribuzin	1,2,3-Trichloropropane
N-Butylbenzene	1,3-Dichloropropene	MTBE	1,2,4-Trimethylbenzene
Sec-Butylbenzene	Dicamba	Naphthalene	1,3,5-Trimethylbenzene
Tert - Butylbenzene	Dichlorodifluoromethane	1-Naphthol	
Carbaryl	Dieldrin	Paraquat	