

**FRANCESTOWN
VILLAGE WATER SYSTEM
EMERGENCY PLAN**

March 23, 2009

**FRANCESTOWN VILLAGE WATER COMPANY
EMERGENCY PLAN
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SYSTEM IDENTIFICATION

Fracestown Village Water Company
P.O. Box 154
Fracestown, NH 03043

EPA Reg. # 0831010

Permit No. 03-0831010

Well Permits:

Well #1:
425' BRW with a 6" casing/Oak Hill Road/0831010-004/50' S of Pump house/11gpm

Well #2:
400' BRW with a 5" casing/Perley Road/0831010-003/On Quinn Property/9gpm

Population Served: 213

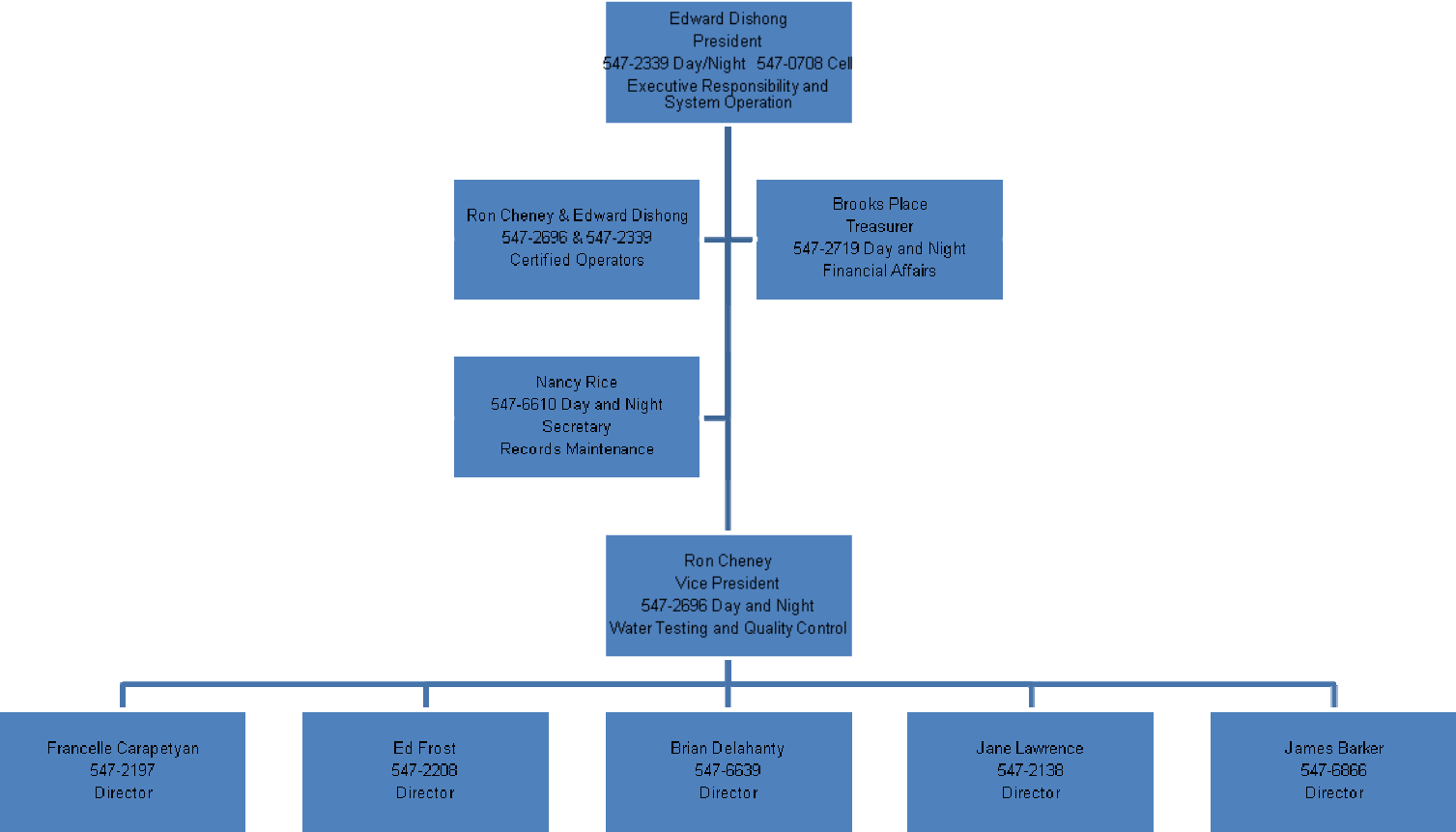
Number of Service Connections: 71

Person Responsible for ERP:

Edward Dishong, President Fracestown Water Company
92 Main Street
Fracestown, NH 03043
(603) 547-2339
mdishong@nashuacenter.org

CHAIN of COMMAND

FRANCESTOWN VILLAGE WATER COMPANY ORGANIZATION CHART



CHAIN OF COMMAND ROLES

PRESIDENT

- Takes over-all executive responsibility for ensuring continuance of potable water to subscribers to the Frankestown Village Water Company.
- Monitors system operations to ensure adequate supply to meet daily system needs.
- Oversee and ensure proper maintenance of system equipment.
- Coordinates operations with certified operators.
- Allocates resources in a manner that will ensure uninterrupted service.
- Maintains Emergency Plan and coordinates emergency response services. Initiates Emergency Plan procedures notifying appropriate members in the organization.
- Provide officers and board members with summary of operations.
- Liaison to all regulatory agencies – EPA, NHDES, et al.

VICE PRESIDENT

- Conduct water supply collection and delivery for analysis as required by regulatory agencies.
- Ensure annual reading of subscribers' meters and delivery of information to Treasurer for billing.
- Discontinue service to delinquent subscribers as determined by President and Treasurer.

TREASURER

- Maintain financial records of the company.
- Prepare billings three times per year for subscribers and collect fees.
- Notify President of subscribers in arrears and what attempts have been made to collect the arrears.
- Pay all company bills in a timely manner.

- Invest surplus funds to maximize return.

WATER SYSTEM OPERATOR

- Provide knowledge and assistance with system components.
- Provide specialized repair of system components.
- Oversee and coordinate the return to normal service procedures.

BOIL ORDER

Should an emergency create the potential that the system has been contaminated with microbiologic pathogens a boil order will be implemented. Such a potential could result from indications that unauthorized tampering of the systems has occurred, a known source contaminant has been introduced and/or test results indicate the presence of a contaminant.

The Frankestown Village Water Company has a phone tree plan in place for notifying all subscribers immediately of any situation/concern in regards to water quality/quantity. The president is responsible for determining if a "boil order" should be disseminated. This plan would include a "boil order". In a situation imminently dangerous to health, any subscriber who could not be reached by phone would receive a personal visit and if not home a written boil order would be left. The phone tree would also be used to notify the subscribers when a boil order was lifted. Forty-nine members can also be contacted by email. See Attachment II for sample written Boil Order such as would be left at a subscribers premise.

Concurrent with the activation of the phone tree, notice would also be given to:

Frankestown Fire Department/EMS	352-1100
Frankestown Police Department	800-562-8201
Frankestown Selectmen	547-3469
Office of Emergency Management	800-852-3792

CRITICAL USERS

At this time there are no critical users.

MUTUAL AID

At this time there are no mutual aid agreements.

NOTIFICATION PROCEDURES FOR WATER SYSTEM USERS

The Company's Vice-President is responsible for implementing notification to the water system users. The Company has approximately 60 service connections, or one connection per household. Notification will be accomplished through a two-step process. First, the Vice-President will notify all households by email, and a limited number of households that do not use email, by telephone. Second, at the same time, the Vice-President will notify, by telephone, the other eight Directors of the Company who will in turn contact an assigned number of users to confirm that they have received the notification.

Each household will be responsible for notifying all other people who reside in that home. For households that cannot be reached by email or telephone, a notice will be posted on their door no more than 2 hours after notification begins.

EMERGENCY NOTIFICATION LIST

The Frankestown Village Water Company President and/or Vice President is responsible for implementing notification to necessary local and state agencies, service/repair contractors and water system subscribers. They will further ensure that the numbers and contacts on the emergency notification list and system subscribers' list are current. In the event of an emergency that results in the telephone system becoming inoperable, the notification will be made by direct visit to the assigned parties.

Local Notification List

President	547-2339	Edward Dishong
Vice President	547-2696	Ron Cheney
Fire Department	352-1100	Non-emergency 547-6664
Ambulance/rescue	352-1100	Non-emergency 547-6664
Police Department	800-562-8201	Non-emergency 547-8650
Water System Operator	547-2696/2339	Ron Cheney/Edward Dishong
Neighboring Water System	924-8008	Peterboro Water Dept. – Ed Betz
Selectmen	547-3469	
Health Officer	547-3469	

State Notification List

State Police	800-525-5555
Water Supply Engineering Bureau	271-3139/3503
Office of Emergency management	271-2231
	800-852-3792
Public Health Service	271-4496

Service/Repair Notification List

General system issues	547-2339	Edward Dishong
Electric Utility	800-662-7764	PSNH
Alarm	753-4044	Capitol Alarm
Pump Specialist	774-6155	Capitol Well
Bulk Water Hauler	883-9444	Francoeur Brothers
Excavator	547-2028	Frankestown Sand & Gravel
Electrician	588-8058	Tony Burke

SYSTEM COMPONENTS

SYSTEM EQUIPMENT AND CHEMICALS

Well #1

425' BRW with a 6" casing.1", 1 hp, 220V pump locate 50' south of control bldg.

Well #2

400' BRW with a 5" casing.1", 1 hp, 220V pump located on the Quinn property.

CONTROL HOUSE

Located on Oak Hill Road

Tanks

2/15,000 gallon buried atmospheric concrete units. Supplied by 1" lines from wells #1 and #2. Has visual level indicator as well as electric level float assembly for controller.

Mains

Entire system has 6" DI mains installed in 1979. Mains flushed annually.

Hydrants

System has 6, triple head Mueller hydrants. Flow tested and serviced annually.

65 Main Street	Static 28 PSI	450 GPM @ 5 PSI
219 Main Street	Static 18 PSI	400 GPM @ 5 PSI
Ball field, Old County Road	Static 38 PSI	420 GPM @ 5 PSI
80 Second NH Turnpike	Static 55 PSI	560 GPM @ 5 PSI
34 Poor Farm Road	Static 38 PSI	470 GPM @ 5 PSI
116 Greenfield Road	Static 39 PSI	450 GPM @ 5 PSI

Chlorinator

10 gal. electric injection unit. Manually operated based on test results.

Electric control panel

Allows pumps to be operated in tandem or independently. Automatically starts pumps when tanks reach predetermined level and automatically shuts pumps off at predetermined tank level. Records hours of pump(s) operation.

Alarm

Electric with battery back-up. Radio Transmit to Central Station. Monitors:

- Intrusion – control house
- Intrusion – well #1
- Intrusion – well #2
- Fire – control house
- Low temperature – control house
- Loss of public power – control house
- Panic – control house pipe pit
- Low water tank level – control house

Plans

Underground

Control Panel

Pipe Schematic

Control House Profile

One set each with President and Vice President

SYSTEM PLAN/DEMAND

Normally two wells operate in tandem – well #1 @ 11 GPM and well #2 @ 9 GPM. These fill the two 15,000 gallon underground tanks. The wells are piped such that either can be isolated and taken off line leaving the remaining well to supply the tanks. The tanks are also piped such that either can be isolated and taken off line with one or both wells supplying the other tank. The piping is also arranged such that both tanks can be taken off line and either one or both wells pump directly into the system. Each well is more than capable of meeting the average system gallons per day requirement independently.

The entire underground supply pipe system is 6" ductile iron. The system is gravity fed with maximum pressure of 55PSI. Sectional gate valves allow us to isolate all of Poor Farm Road, all of Second NH Turnpike, all of Greenfield Road and all of Oak Hill Road. We cannot isolate individual sections of those roads. It is also possible to isolate the upper end of Main Street (#177-219), The Middle section of Main Street (#108-170) and the lower portion of Main Street (#1- 107) – NOTE: Isolating the lower portion of Main Street will also remove all of Poor Farm Road, Second NH Turnpike and Greenfield Road from service.

Total production capacity of system: 29,340 gallons per day
Total storage capacity of system: 30,000 gallons
Average daily demand of system: 5,500 gallons
Maximum daily demand of system: 7,000 gallons
Estimated available water: 5 days

ALTERNATE WATER SOURCE

In discussions with the Peterborough Water Dept. and Antrim Water dept. it was determined that they are both able to provide Frankestown Village Water Company with 6-10,000 gallons of water per day. Francoeur Brothers (883-9444) would truck this water to our atmospheric tanks. Two ounces of liquid 5.25% sodium hypochlorite would be added for each 1,000 gallons.

The tank truck is available with one-day turn-around and priority is given to municipal water suppliers. A gallon of 5.25% sodium hypochlorite is on hand at the system control house.

The Frankestown Village Water Company currently has two sources of water (well #1 and well #2), each of which is more than capable of meeting the maximum daily needs of the system. Should one well become unusable, the other well can continue meeting the needs of the system until a new well can be drilled. Our water well service provider (Capitol Well) will provide priority service and can commence drilling of a new well within one day of notification. Our certified operator (Water System Operators) is on retainer to provide any such emergency service as may be necessary.

There are no adjacent water supplies that the Frankestown Village Water Company could connect to.

Interconnections/New Source/Reactivation: Not applicable

ALTERNATE POWER

In case of prolonged power outage, if power is not restored by the third day, we will request to connect to an emergency generator. The generator will be supplied by the Frankestown Fire Department. The generator will be used to run pump #1, which is a 1 hp, 220V pump. The generator is currently maintained by the Frankestown Fire Department and is used in emergency situations. The generator was last used at the pump house on December 15, 2008. The generator is capable of running 24 hours/day with refueling, with fuel supplied by the Frankestown Fire Department. It can be transported.

WATER CONSERVATION

Both of the wells are capable of supplying over twice our average daily demand of the system (5,500 gal/day). Well #1 can deliver 15,840 gal/day and well #2 can deliver 13,500 gal/day.

Water conservation is considered to be a marginally effective option at best. Maximum daily usage is not a good deal higher than average daily usage. Under a recent mandatory outdoor water restriction order (Phase I - during a period of revamping of Well #2), the average daily usage declined by only 300 gals/day. All but 8 of the system subscribers are residential users and there is little outdoor watering, car washing, etc. It does not appear that we should rely on conservation as a significant means of coping with a loss of capacity.

Non-residential users include the Francestown Police Station, Francestown Town Hall, Francestown Town Offices, Old Meeting House, Community Church, Bixby Library, Masonic Hall and the Francestown Village Store.

As a tool to deal with an emergency, mandatory conservation priorities would be

- | | |
|-----------|---|
| Phase I | No outside use of water (watering lawns and gardens, washing cars, etc.) |
| Phase II | Odd/even days for domestic laundry (based on house street number). Compliance with Indoor Water Use Restrictions as outlined in DES Fact Sheet #WD-WSEB-26-2. |
| Phase III | Curtailment of service to non-essential users: <ul style="list-style-type: none"> • Masonic Lodge • Old Town Hall • Bixby Library • Old Meeting House • Community Church |
| Phase IV | Rationing will be implemented. |

RETURN TO NORMAL OPERATION

Following an emergency where the subscribers to the system had been notified, the phone tree would be utilized to ensure that subscribers were aware that the emergency situation had been corrected and that normal, unrestricted use of the system was again possible.

In addition, any emergency services that had been advised of the problem would be notified that the problem had been corrected.

Fracestown Fire Department/EMS	352-1100
Fracestown Police Department	800-562-8201
Fracestown Selectmen	547-3469
Office of Emergency Management	800-852-3792

VULNERABILITY ASSESSMENT

COMMON EMERGENCIES

Water Main Break

- Notify President and Vice President of Francestown Village Water Company, Francestown Police and Fire Departments.
- Close appropriate gate valves in street to isolate break or if necessary the main tank output valves in the control house.
- Call Water System Operators to respond and Francestown Sand & Gravel to excavate.

Note: Water System Operators stocks the necessary equipment and supplies to address a water main break – sleeves, etc. The entire Francestown Village Water Company supply grid is 6" DI.

- Activate phone tree to notify subscribers.
- Following repair of break, the appropriate hydrant will be used to flush that portion of the system.
- Subscribers, Fire and Police Departments will be notified by phone tree that system is back in service.

Loss of Power

The system can operate approximately four days with the supply in the tanks. The alarm system monitors loss of municipal power and alarm company will notify the Francestown Village Water Company.

- PSNH will be contacted and an estimate obtained for restoration of service. If the estimated time to restore service is more than 2 days, the phone tree will be activated and conservation of use requested – level Phase II.
- If power is not restored by the third day, the electrician will be requested to connect an emergency generator. A generator and emergency fuel supply is available and stored at Francestown Fire Department, 2nd NH Turnpike South.
- Following restoration of service, subscribers will be notified by phone tree that conservation of use restriction is lifted.

Loss of Supply

- Loss of supply will result in a low tank alarm being transmitted to the Central Station Alarm company who will notify Francestown Village Water Company officials who will determine reason for loss.
- Certified operator (Water System Operators) will be notified to correct the problem.
- If the problem is due to loss of a well(s) or pump(s), Capitol Well will be notified to replace pump or address the well problem by hydrofracing, drilling new well, etc.
- If the problem is due to piping or wiring, Water System Operators will correct the problem - with outside assistance if necessary.
- If the estimated time to restore service is more than 2 days, the phone tree will be activated and conservation of use requested – level Phase II.

- If interruption is to be prolonged and affects both supplies, the emergency supply procedure with Peterborough or Antrim will be implemented with a tanker truck from Francoeur Brothers.
- Following restoration of service, subscribers will be notified by phone tree that the conservation of use restriction is lifted.

Loss of Storage Capability

- Loss of one tank will not impair the system. The tank will be isolated and removed from service while repairs are made.
- Should both tank become unusable, they will be isolated and removed from service. Valves will be positioned so the wells can pump directly into the mains.
- The phone tree will be activated and conservation of use requested – level Phase III.
- Francoeur Brothers will be contacted to site a potable water tanker at the Control house until repairs are made. This tanker will be tied to the existing tank fill pipe with valves positioned so as to allow the tank to directly feed the service main.
- Water System Operators will make a temporary connection to the well supply lines so they pump directly into the tanker. The pumps will be manually operated during the period while the permanent tanks are repaired/replaced.

Loss of Electronic Controller

Controller parts are readily available and can be installed by our certified operator (Water System Operators).

- Controller failure will result in either failure of pumps to start or failure to shut off. Our alarm monitors for tank level and routine readings will indicate a controller failure.
- Contact our certified operator (Water System Operators) to respond and correct problem.

Vulnerability to compromise of the system

The current alarm system connected to a central station will advise of any attempts to tamper with the well heads and control house/tank access hatches. The alarm system will also indicate mechanical failures due to low tank (loss of supply or break), low heat in the control house and loss of public power to the control house/pumps. Alarms will also indicate any fire in the control house.

- A review of the National Rural Water Association Vulnerability Self-Assessment Guide indicated few deficiencies. These would include: Fencing the areas surrounding the control building and well heads.
 - ACTION – none planned at this time. All areas are readily visible from the road and do to large areas would not be cost effective. Locked chains have been installed across access roads.
- Installing external lighting.
 - ACTION – none planned at this time. All areas are readily visible from the road.
- Install signs warning of trespass, etc.
 - ACTION – policy has changed and removal of such signs is now recommended. This has been done.
- Backflow preventer installation program has been completed.

- Files and plans relating to the system and its design to be stamped “Confidential”.
 - ACTION - this has been done. The President and the Vice President of the company hold a complete set of such data.

SOURCE WATER ASSESSMENT

The most recent NH Department of Environmental Services assessment report indicates a low over-all susceptibility for both wells.

In 8 of the 12 factors considered, both wells were considered to have a low susceptibility factor.

Both wells received a medium susceptibility rating in two areas.

1. In the well head protection area, development other than that associated with the well but no sewer line, septic system, or regulated substance storage.
 - The Francestown planning board is aware of the location of the wells and would factor this in any consideration of an application for any of the above.
 - The Francestown Village Water Company is not in a position to purchase all land within the well head protection area that is not already under our ownership.
2. Located within 500’ of the wells, fewer than 10 septic systems and no sewer line and fewer than 30 septic systems in the remainder of the well head protection area.
 - The Francestown planning board is aware of the location of the wells and would factor this in any consideration of an application for any of the above.
 - The Francestown Village Water Company is not in a position to purchase all land within the well head protection area that is not already under our ownership.

Both wells received a high susceptibility rating in two areas.

1. One or more numbered state highways within the wellhead protection area and within 1000 feet of the well.

Route 47 (Bennington Road) passes over the outer limits of both the wellhead protection areas. It is beyond the scope of the Francestown Village Water Company to alter this situation. It is felt our current

- water monitoring program is sufficient to identify any associated problems.
2. 10% or more agricultural cover in the well head protection area.
 - The Francestown Village Water Company is not in a position to purchase all land within the well head protection area that is not already under our ownership. However, changing land use has significantly reduced the amount of agricultural activity in this area. Lots have been sold for residential use and the Francestown Planning Board has monitored the installation of septic systems.

Town roads within the wellhead protection area (Oak Hill Road and Perley Road) are dirt roads and the Francestown Highway Department does not use salt on these roads.

PLAN READINESS AND TRAINING

Each of the officers and board members of the Francestown Village Water Company hold a copy of this plan. In addition, the Francestown Police and Fire/EMS Departments, the Francestown Selectmen's office, the Francestown Planning Board and our Certified Operator hold copies. A copy of this plan is also maintained at the control house on Oak Hill Road. Subscribers to the system will be notified of the plan existence and advised that a copy of the entire plan is available for their review and who to contact if they would like to review the plan.

An emergency preparedness drill will be held annually with the Francestown Police and Fire/EMS Departments. See attachment #1 for drills scenarios and potential impact.

This plan will be reviewed annually and resubmitted every six years to the NH Department of Environmental Services and the following plan holders:

- Officers and Board of Directors of the Francestown Village Water Department
- Francestown Fire/EMS Departments
- Francestown Board of Selectmen
- Francestown Planning Board
- Water System Operators

SIGNATURES

President/Operator Francestown Village Water Company:

Edward Dishong

Representative of the Owner Francestown Village Water Company:

Ron Cheney

EMERGENCY PLAN DRILLS

Vehicle accident on roadway – severe impact

Concern is for a vehicle accident and a resultant release of gasoline or other fluids. Oak Hill Road and Perley Road are located within 100' of our wells. This could result in long term or permanent loss of one or both our sources. Drill should include hazardous waste mitigation and spill clean-up procedures. This would negatively impact the supply portion of our system.

Fire in control building – severe impact

Concern is that a fire in the control building will cause interruption to service. This could include, but not be limited to, loss of power to operate the pumps; loss of automatic controls to maintain service; loss of supply piping (it is plastic); and/or pollution of tanks. Drill should address type of fuel (wood building, plastic piping, electronic controls) and extinguishing methods that will minimize possibility of pollution to tanks. This would negatively impact the delivery portion of our system.

Contamination threat/attempt/incident – severe impact

Concern is for the health and safety of system users. Should a contaminant be suspected (by threat, actual attempt or water monitoring indication), users must be immediately notified and steps take to remediate the contamination and identify the source of the contamination – person or thing. This would negatively impact the supply, storage and delivery portions of our system.

Personal Injury in pipe pit – minor impact

Concern is for the well being of the individuals who must enter the pit area. This is a confined space and rescue efforts need to address limited access. A panic alarm has been located in the pit and is connected to a central station alarm service. This would impact system personnel and/or contractors.

NOTICE

EMERGENCY BOIL ORDER

**EFFECTIVE IMMEDIATELY – ALL WATER MUST BE BOILED A
MINIMUM OF 20 MINUTES BEFORE USE.**

The Frankestown Village Water Company has determined that there is a possibility of contamination of the water supply. Immediate steps have been taken to locate the source of the contaminate and treat the water supply. Until these steps are complete, all users of water supplied by the Frankestown Village Water Company are advised that water must be boiled for a minimum of 20 minutes prior to use.

The Frankestown Village Water Company is working with the NH Department of Environmental Services, the NH Office of Emergency Management and the Frankestown Fire Dept./EMS and Police to correct this problem. As soon as comprehensive testing by the our certified laboratory indicates that the water is safe, you will be notified that the boil order is no longer in effect.

We regret the inconvenience that this boil order may create and thank you for your understanding in this matter.