AGENDA FOR THE COUNCIL MEETING OF THE BOROUGH OF MOUNTAIN LAKES HELD AT THE BOROUGH HALL, 400 BOULEVARD, MOUNTAIN LAKES, NJ 07046
OCTOBER 14, 2019
EXECUTIVE CLOSED SESSION – BEGINS AT 7:00 PM
PUBLIC SESSION – BEGINS AT 7:30 PM

1) **CALL TO ORDER AND OPEN PUBLIC MEETINGS ACT STATEMENT – Mayor**
This meeting is being held in compliance with Public Law 1975, Chapter 231, Sections 4 and 13, as notice of this meeting and the agenda thereof had been reported to The Citizen and the Morris County Daily Record and The Star Ledger on January 9, 2019 and posted in the municipal building.

2) **ROLL CALL ATTENDANCE - Clerk**

3) **FLAG SALUTE – Mayor**

4) **EXECUTIVE SESSION**
R141-19 Resolution to Enter an Executive Session – Sunset Dam Rehabilitation Project

5) **COMMUNITY ANNOUNCEMENTS**

6) **REPORTS OF BOROUGH ESTABLISHED BOARDS, COMMISSIONS AND COMMITTEES**

7) **PUBLIC COMMENT**
Please state your name and address for the record. Each speaker is limited to one (1) comment of no more than five (5) minutes and no yielding of time to another person.

8) **BOROUGH COUNCIL DISCUSSION ITEMS**
a. Tree Replacement Ordinance
b. Eastbound Route 46 Ordinance Update
c. Agenda Management

9) **ATTORNEY'S REPORT**

10) **MANAGER'S REPORT**
Annual Best Practices Review

11) **ORDINANCES FOR ADOPTION**

a. Ordinance 12-19, Ordinance Amending Chapter 111 of the Revised General Ordinances of the Borough of Mountain Lakes and Revising the Fee Schedule

PUBLIC COMMENT
Please state your name and address for the record. Each speaker is limited to one (1) comment of no more than five (5) minutes and no yielding of time to another person.

b. Ordinance 13-19, Ordinance Authorizing the Salary and/or Wages of the Officers and Employees of the Borough of Mountain Lakes, County of Morris, New Jersey

PUBLIC COMMENT
Please state your name and address for the record. Each speaker is limited to one (1) comment of no more than five (5) minutes and no yielding of time to another person.

12) ***CONSENT AGENDA ITEMS***
Matters listed as Consent Agenda Items are considered routine and will be enacted by one motion of the Council and

one roll call vote. There will be no separate discussion of these items unless a Council member requests an item be removed for consideration.

***RESOLUTIONS**

a. *R139-19 Resolution Authorizing the Payment of Bills*
b. *R140-19 Resolution Confirming the Term of Appointment of Monica Goscicki as Chief Financial Officer*
c. *R142-19 Change of Procedure for Claimant Certification*
d. *R143-19 Resolution to Authorize the Establishment of a "Dedication by Rider" to the Budget of the Borough of Mountain Lakes for Electronic Receipt Fees*
e. *R144-19 Resolution Authorizing 2019 Municipal Employees Salary*

***APPROVAL OF MINUTES**

September 23, 2019 (Regular) ***HAPPER NOT ELIGIBLE***

***BOARD, COMMITTEE AND COMMISSION APPOINTMENTS**

a. *Vicky J. Maniatis to the Green Team Committee*
b. *Lucas A. Sterling to the Shade Tree Committee*

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13) COUNCIL REPORTS

14) PUBLIC COMMENT

Please state your name and address for the record. Each speaker is limited to one (1) comment of no more than five (5) minutes and no yielding of time to another person.

15) NEXT STEPS AND PRIORITIES

16) ADJOURNMENT

Resolution 141-19
RESOLUTION TO ENTER INTO AN EXECUTIVE SESSION

WHEREAS, the Open Public Meetings Act, N.J.S.A. 10:4-6 et seq. permits the exclusion of the public from a meeting in certain circumstances; and

WHEREAS, this public body is of the opinion that such circumstances presently exist; and

WHEREAS, the Governing Body wishes to discuss:

- ☐ Matters made confidential by state, federal law or rule by court
- ☐ Matters in which the release of information would impair the right to receive funds from the Government
- ☐ Matters involving individual privacy
- ☐ Collective bargaining
- ☐ Purchase or lease of property, setting of bank rates, investment of public funds if disclosure would harm the public interest
- ☐ Public safety
- ☒ Pending, ongoing or anticipated litigation or contract negotiation
- ☐ Personnel matters
- ☐ Civil penalty or loss of license

Minutes will be kept and once the matter involving the confidentiality of the above no longer requires that confidentiality, then the minutes can be made public.

NOW THEREFORE BE IT RESOLVED that the public be excluded from this meeting.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CERTIFICATION: I hereby certify the foregoing to be a true and correct copy of a resolution duly adopted by the Borough Council of Mountain Lakes, New Jersey, at a meeting held on October 14, 2019.

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Marcy Gianattasio, Municipal Clerk

Name	Motion	Second	Aye	Nay	Absent	Abstain
Happer						
Horst						
Korman						
Lane						
Menard						
Shepherd						
Barnett						

Memo

MURPHY McKEON P.C.
COUNSELLORS-AT-LAW

To: Mayor and Council, Borough of Mountain Lakes

From: Robert H. Oostdyk, Jr., Esq.

Date: October 8, 2019

Re: Proposed Amendments to the Tree Protection Ordinance

I have reviewed the draft amendments to the Tree Protection Ordinance promulgated by the Shade Tree Commission. The validity of ordinances enacted under police powers of a municipality for the protection of natural resources has been affirmed by the Courts with tree protection ordinances, in particular, upheld upon challenge. *N.J. Shore Builders Ass'n v. Twp. of Jackson*, 199 N.J. 38, 54 (2009). Consequently, I do not have concerns with the legality of our current ordinance or the proposed changes. I do, however, offer some comments and suggestions.

The first proposed set of changes are to Section 102-33 "Purposes". Subsections A and B of the proposed changes further articulate the rationale for regulating tree removal and provide additional support for the regulation. Subparagraph C is a proposed addition. My concern about this paragraph is that it states that the Chapter "regulates and controls the removal of trees on **all** public and private property". I do not think this is accurate as tree removal on non-residential property and vacant land is not regulated unless development is proposed. Subparagraph D is another proposed addition which addresses enforcement. I would delete this paragraph as it imposes a "duty" on the Borough officials which could be a liability concern and it limits who can enforce the Code. I think it is best to leave enforcement to the direction and discretion of the Manager who can assign and reassign staff to enforcement as circumstances dictate and opt not to enforce certain aspects when he or she deem it advisable to do so. This also arguably would prevent residents from bringing their own actions to enforce the Code in court.

The definition section of the Code (102-34) would also be amended by the proposed Ordinance amendments. Most of the changes are self-explanatory and consistent with the proposed changes. My only concern is with the definition of a "tree specialist". Subparagraph A provides that this position will be under the direction of the Shade Tree Commission. Consultants and/or employees should always operate under the direction of the Borough Manager in our form of government.

A substantive change proposed in the draft is the regulation of the removal of certain trees from residential lots which is covered by Section 102-36. Currently only those trees located within the setback lines of a residential property are regulated. Under the revised ordinance certain trees anywhere on the lot are subject to regulation. This expansion in regulation is strictly a policy decision. My only concern would be that the

Borough Manager be prepared to deal with the additional requirements since under our ordinance (somewhat unusually) the Manager is charged with the direct management of permitting. At a minimum I suggest we provide that it is the "Manager or his or her designee" who is charged with this responsibility so that this task could be assigned to a consultant or employee. While the appeal to the Council on permit issues is not new (and I do not recall it ever having happened) in this draft the expansion of coverage makes an appeal more likely in the future. We should think about whether or not the Council is really the best place for a hearing on tree removal issues. Perhaps the Commission with its more specialized knowledge of tree issues would be a better alternative or even the Board of Adjustment which is the jurisdictional authority for appeals of other zoning code related issues.

The draft amendments would also set a procedure for escrows and funds for tree replacement. The language used seems clear and, particularly the section on replacement trees, is very clear and comprehensive and should aid in the enforcement of the requirements.

A requirement for local licensure is established in new proposed Section 102-40. Since the State now licenses individuals involved in tree care services, I would suggest we use the term "registration" rather than "license" since we would be essentially using this to be sure that anyone engaged in tree care services in the Borough is properly licensed by the State and understands the local regulations in the Borough. The distinction is that we would be using this as an enforcement/education tool rather than regulating the qualifications which we cannot do since the State has taken that over. If this is going to be done, we need to determine which office handles registration, if there is a fee, and probably specify what we mean be a "tree care service" so it is clear who needs to register.

Chapter 102

Article VII

A. There is a strong interrelationship between the integrity of the Borough's tree canopy, our water and other natural resources, and land use development. The preservation of trees and their protection from significant harmful effects caused during development and other activities serves the public health, safety and welfare of Mountain Lakes

B. Preservation and maintenance of the Borough's tree canopy is important to the community in the following ways:

~~The purpose of this article is to ensure the preservation and protection of street trees and shrubs and protected trees in the setback area of residential lots.~~

~~:~~(1) Enhancing property values.

(2) Reducing ~~runoff~~ soil erosion into ~~the~~ our lakes and streams;

(3) Reducing utility supply disruption;

(4) Improving air quality;

(5) Conserving water ~~;~~through lower soil temperatures (evaporation) and decreased water runoff;

(6) Reducing utility demand by providing cooling in summer;

(7) Abating noise, ~~especially from surrounding highways; and~~

(8~~6~~) Contributing to the pleasant parklike ambience of the community~~; and~~.

C. Thus, the Borough of Mountain Lakes Council encourages the preservation of mature trees, regulates and controls the removal of trees on all public and private property, and requires appropriate tree replacement.

D. The enforcement of this chapter shall be the duty of the Borough Manager, the Code Enforcement Officer and the Shade Tree Commission of Mountain Lakes and its agents, such as the Borough Tree Specialist, through the regulation, planting, care and control of shade, ornamental and evergreen trees and shrubs in the streets, highways, public places of the Borough and tree removal on all lands within the Borough.

Definitions.

Certain words, phrases and terms are defined below for purposes of this article, unless the context otherwise requires:

AFFECTED NEIGHBOR

The owner of record of any property adjacent to the affected property.

AFFECTED PROPERTY

The lot or lots for which a tree removal permit, road opening permit, soil moving permit or construction permit is issued.

APPLICATION FOR DEVELOPMENT

As defined in § **40-3** of the Code of the Borough of Mountain Lakes.

CONSTRUCTION PERMIT

The permit required by Chapter **88**, Article **II** of the Code of the Borough of Mountain Lakes.

DEVELOPMENT

As defined in § **40-3** of the Code of the Borough of Mountain Lakes.

DIAMETER BREAST HEIGHT (DBH)

The diameter of a tree measured 4 1/2 feet above the uphill/highest side.

LOT LINE

As defined in § **40-3** of the Code of the Borough of Mountain Lakes.

OWNER

As defined in § **40-3** of the Code of the Borough of Mountain Lakes.

PROTECTED TREE

Any tree ~~eight~~ six or more inches in diameter or 25 inches or more in circumference measured at a point 4 1/2 feet above the ground whose trunk is ~~wholly in the setback area of~~ on the affected property. If a tree has multiple trunks, then each trunk's diameter shall be measured and added together to determine the size of the tree.

RIGHT-OF-WAY

As defined in § **40-3** of the Code of the Borough of Mountain Lakes.

ROAD OPENING PERMIT

The permit required by § **204-25** of the Code of the Borough of Mountain Lakes.

~~**SETBACK AREAS**~~

~~The area between the lot lines and the setback lines of a lot.~~

~~**SETBACK LINE**~~

~~As defined in § **40-3** of the Code of the Borough of Mountain Lakes and listed in Schedule I: Bulk Requirements.~~

SHRUB

A woody plant that does not have a center trunk and does not typically grow over 10 feet high.

SOIL MOVING PERMIT

The permit required by § **102-11** of the Code of the Borough of Mountain Lakes.

STREET TREE OR SHRUB

Any tree or shrub upon any Borough street, right-of-way, highway, public place or park.

TREE

Any living deciduous or coniferous species which reaches a typical mature height of 12 feet or more and has a typical mature diameter of four inches or greater measured at a point 4 1/2 feet above the ground.

TREE CANOPY

The extent of the outer layer of leaves of an individual tree or group of trees. **Canopy cover** is commonly expressed as a percentage of total ground area; for example, at 50 percent canopy cover, half of the total ground area is covered by the vertical projection of tree crowns.

TREE ESCROW FUND

A fund established by the governing body for the administration and promotion of tree and shrubbery resource sustainability projects and practices which may be consistent with the Community Stewardship Incentive Program as outlined within the New Jersey Shade Tree and Community Forestry Assistance Act, P.L. 1996, c. 135.[1]

TREE PRESERVATION AND REMOVAL PLAN (TREE MANAGEMENT PLAN)

A specific plan that contains tree locations and other information in accordance with §102-36 herein.

TREE REMOVAL PERMIT

The permit required by § **102-36** of the Code of the Borough of Mountain Lakes for removal of trees.

TREE SPECIALIST

A. The Tree Specialist, appointed by the Borough Council, shall be responsible for the administration and protection requirements of this chapter and enforcement of the chapter as directed by the Shade Tree Commission.

B. A Tree Specialist is either of the following:

(1) A forester who shall have a bachelor's degree in forestry or arboriculture from a college or university shall be certified as a certified tree expert by the State of New Jersey and shall have a minimum of three years' experience in planting, care and maintenance of trees.

(2) A conservation officer who shall be certified as a certified tree expert by the State of New Jersey and shall have a minimum of three years' experience in planting, care and maintenance of trees.

C. The Tree Specialist shall have the responsibility of reviewing Tree Management Plans and inspecting the site for plan compliance if requested by the Borough Manager. The Tree Specialist shall be paid from the Tree Escrow Fund, which is established herein, and shall be paid in accordance with a fee schedule established by contract with the municipality.

§ 102-35**Street trees and shrubs in rights-of-way.**

A.

Regulations.

(1)

Approval for planting or removing street trees or shrubs. No person shall plant, prune or remove any tree or shrub upon any Borough street, right-of-way, highway, public place or park without written permission from the Shade Tree Commission. Except as required by Subsection **A(2)** herein, this provision shall not be construed to require a street tree management plan to plant or remove a tree or shrub upon any Borough street, right-of-way, highway, public place or park.

(2)

Street tree management plan required. The Construction Official shall not issue a construction permit for erecting or constructing a building or addition or alteration thereof or improvements upon a property, a road opening permit, or a soil moving permit until a street tree management plan has been approved by the Shade Tree Commission and implemented in accordance with the regulations and provisions of § **102-35**. Throughout a period of any construction, alteration or repair to any building or structure, or work on a site which is subject to an approved street tree management plan, the owner, tenant, person, firm or corporation causing said construction, improvement or work shall in all respects comply with an approved street tree management plan. The Planning Board or Zoning Board of Adjustment shall require as part of an application for development a street tree management plan approved by the Shade Tree Commission.

(3)

Other restrictions. No person shall:

(a)

Cut, break, injure or remove a tree or shrub upon any Borough street, right-of-way, highway, public place or park. This provision shall not apply to the actions of the Borough or a duly franchised public utility in the case of an emergency.

(b)

Place rope, wire, sign, poster or other fixture on a tree or shrub upon any Borough street, right-of-way, highway, public place or park or injure, misuse or remove any device placed to protect a tree or shrub upon any Borough street, right-of-way, highway, public place or park. This provision shall not apply to the actions of the Borough or a duly franchised public utility in the case of an emergency.

(c)

Fasten or attach an animal to or cause or allow an animal to injure a tree or shrub upon a Borough street, right-of-way, highway, public place or park.

(d)

Place or store, or cause to be placed or stored, any earth, stone, cement, sidewalk, or other substance, that impedes the free access of water and air to the roots of a tree or shrub upon any Borough street, right-of-way, highway, public place or park.

(e)

Pour salt water or other chemical, build fires or station any incinerator, tar kettle, road roller or other engine on or near a tree or shrub upon any Borough street, right-of-way, highway, public place or park in any such manner that the vapor or fumes therefrom may injure the same.

B.

Street tree management plan.

(1)

Application. Any owner, person, firm or corporation who shall seek approval of an application for development by the Planning Board or Zoning Board of Adjustment; apply for a construction permit to erect or construct or cause to be erected or constructed a building or addition thereto or alteration thereof or install or cause to be installed improvements upon any property; seek a road opening permit; or seek a soil moving permit shall as a condition thereof apply for and receive approval for and comply with a street tree management plan on such forms and provide such information as may be reasonably required to satisfy the intent and purpose hereof by the Shade Tree Commission in accordance with the following:

(a)

Identify, by street, block and lot number, the site and adjacent Borough streets, rights-of-ways, highways, public places and parks.

(b)

Provide the name, address and telephone number of the owner or duly authorized agent of said owner, where applicable.

(c)

Identify and place on a site plan or survey the location of any existing and/or proposed tree or shrub on adjacent Borough streets, rights-of-ways, highways, public places and parks.

(d)

Mark any existing tree or shrub and/or the location of a proposed street tree or shrub, by visible, weatherproof and reasonably tamperproof means such as colored plastic tape. Existing trees or shrubs shall not to be sprayed with paint or chemicals or otherwise permanently marked, damaged or defaced.

(e)

Identify and mark a tree protection zone around trees and shrubs upon Borough streets, rights-of-ways, highways, public places and parks adjacent to the site to a minimum of one foot from the tree trunk in all directions where feasible equal to one-inch diameter of tree trunk (for example, 10 feet from a tree 10 inches in diameter) and one foot beyond the dripline of a shrub. The diameter of the tree must be determined as follows: measure the circumference of the tree 4.5 feet above the ground, then divide that number by 3.14. This is the diameter of the tree.

(f)

Construct and maintain barricades made of snow fencing, or comparable fence material approved by the Shade Tree Commission, to a height of no less than four feet around the perimeter of the tree protection zone, as identified above, until all work is completed and the condition of trees and shrubs within the tree protection zone is approved by the Shade Tree Commission.

(g)
Place signs on barricade denoting a tree protection zone.

(h)
Place all equipment, supplies, stockpiled earth and stones, ditches, and underground utility lines outside the tree protection zone. If an underground line must go within a tree protection zone, it is to be installed by a method approved by the Shade Tree Commission that minimizes to the extent feasible cutting of or damage to roots.

(i)
At the discretion of the Shade Tree Commission, fertilize protected trees and shrubs which show evidence of stress from construction activity to increase vigor and aid in overcoming stress.

(j)
Designate specific corridors for site access, where the driveways or parking areas or walks will be located, and provide protection of root zones where necessary.

(k)
Where a change of slope may cause harm to any existing tree or shrub upon a Borough street, right-of-way, highway, public place or park, a well or other means of protective barrier shall be erected accordingly, said barrier not to encroach on the area required to sustain life of the same.

(l)
In the event it is proposed to replace an existing tree or shrub or in the event a tree or shrub is killed, destroyed or substantially damaged during construction, it must be replaced by one or more trees or shrubs of equivalent size and of a type approved by the Shade Tree Commission. If replacing a tree with a trunk diameter greater than 2.5 to three inches measured 4.5 feet above the ground, in lieu of planting one tree with equivalent trunk diameter, a larger number of smaller trees may be planted, according to a formula based on the diameter of the trunk of the destroyed or damaged tree: For every two inches of tree diameter damaged or destroyed, plant one replacement tree acceptable to the Borough with a two-and-one-half to three-inch diameter measured one foot above planting level. To the extent such replacement tree or trees cannot reasonably be located upon the Borough street, right-of-way, highway, public place or park in place of the original existing tree, the Borough may designate an alternate location upon any Borough street, right-of-way, highway, public place or park.

(2)
Review. The Shade Tree Commission shall review a street tree management plan to determine its compliance with the requirements of this section. In reviewing the aforesaid items, the Shade

Tree Commission may utilize the services of the Borough Manager, Borough Engineer, ~~Arborist~~Tree Specialist, or other Borough staff or consultants.

(3)

Time for decision. The Shade Tree Commission shall, within 15 days after receipt of a complete application, render its decision.

C.

Maintenance guaranty. In the event the planting of trees or shrubs or the replacement of existing trees or shrubs is proposed, an applicant shall post a maintenance guaranty equal to 120% of the estimate of the Shade Tree Commission to plant or replace the same, which maintenance guaranty shall be subject to acceptance by the Borough Council. Upon completion of all construction or disturbance, an applicant may seek approval of planted or replaced trees and shrubs. All trees or shrubs which fail to survive for a period of three years following the approval thereof by the Shade Tree Commission shall be replaced at no cost or expense to the Borough. The replacement shall be made within 60 days following written demand for such replacement or within such additional time as the Shade Tree Commission may direct. In the event the applicant shall fail to comply with the written demand for such replacement by the Shade Tree Commission, the Council may default the guaranty upon notice to the applicant and the sum thereof shall be forfeited to the Borough of Mountain Lakes and applied to the budget of the Shade Tree Commission or Borough. A guaranty shall be released by the Council upon completion of all construction or disturbance, approval of planted or replaced trees and shrubs by the Shade Tree Commission and survival thereof for a period of three years following approval.

§ 102-36**Protected trees on ~~within setback area of~~ residential lots.**

A.

Regulations.

(1)

Tree removal permit required. No person shall remove a protected (6 inch or greater) tree, ~~which does not include dead rees, in the setback area of~~on a residential lot without first obtaining a tree removal permit. A tree removal permit shall not be required for removal of a protected tree if the work to be done is in accordance with an approved ~~setback t~~Tree M~~m~~anagement ~~p~~Plan and the related permits required by Subsection **A(2)** herein. ~~The tree removal permit shall be automatically approved, with no requirement for neighbor notification, if no more than 50%, up to a maximum of three of the protected trees, which does not include dead trees, in the setback area have been or will be removed in a twelve-month period.~~

(2)

~~Setback tTree Mmanagement pPlan required~~. The Construction Official shall not issue a construction permit for erecting or constructing a building or addition or alteration thereof or improvements upon a property, a road opening permit, or a soil moving permit until a ~~setback~~ tTree Mmanagement Pplan has been approved by the Borough Manager and implemented in accordance with the regulations and provisions of § **102-36**. Throughout a period of any construction, alteration or repair to any building or structure, or work on a site which is subject to an approved ~~setback T~~tree Management Plan, the owner, tenant, person, firm or corporation causing said construction, improvement or work shall in all respects comply with an approved ~~setback T~~tree Mmanagement P~~plan~~LAN. The Planning Board or Zoning Board of Adjustment shall require as part of an application for development a ~~setback t~~Tree mManagement ~~p~~Plan approved by the Borough Manager.

B.

~~Setback tTree Mmanagement pPlan~~ and tree removal permit. When required by Subsection **A(1)** herein, an application for a tree removal permit shall be submitted on forms provided by the Borough Manager. When required by Subsection **A(2)** herein, a ~~setback t~~Tree ~~m~~Management ~~p~~Plan for protected trees shall be submitted in like manner to § **102-35B**. A ~~setback t~~Tree Mmanagement ~~p~~Plan must show the location of each protected tree ~~within the setback area of~~on the affected property. The plan must also include any tree or shrub on any Borough right-of-way abutting the affected property. The ~~setback t~~Tree ~~m~~Management ~~pl~~Plan must identify each protected tree and whether and how it will be protected. The ~~setback t~~Tree Mmanagement ~~p~~Plan or tree removal permit must be approved by the Borough Manager in accordance with the procedures and standards set forth in Subsections **D** and **E** below. The Borough Manager may seek the advice of the Shade Tree Commission, the Borough Engineer, the Tree Specialist ~~Arborist~~ or other Borough staff or consultants in making any of the decisions entrusted to the Borough Manager by § **102-36**. The Borough Manager shall render his decision on a ~~setback t~~Tree Mmanagement pPlan or tree removal permit within 15 days after receipt of a complete application and the completion of the neighbor notification period in Subsection **E**.

C.

Appeal to Council. The applicant shall have the right to appeal the decision of the Borough Manager regarding the ~~setback tTree M~~management Pplan or tree removal permit to the Council of the Borough within 10 days of receiving written notice of a decision. Said appeal shall be by written notice of appeal to the Borough Clerk. Upon receipt of said appeal, the Council shall proceed to hear said appeal upon notice to the applicant within 30 days after the filing of said notice of appeal. The Council may, in its discretion and upon complete review of the application and after hearing such testimony as may be warranted, reverse, modify or affirm the aforesaid decision.

D.

Standards. Upon receipt of a ~~setback T~~tree ~~m~~Management ~~p~~Plan or application for a tree removal permit, the Borough Manager shall review it and inspect the site on which the protected trees are located. The Borough Manager shall consider the following factors in deciding whether to approve the ~~setback t~~Tree M~~m~~anagement ~~p~~Plan or the application for a tree removal permit:

(1)
Whether the preservation of the protected tree or trees is important to the benefits of § **102-33**.

(2)
~~The overall effect of~~ Whether removal of such protected tree or trees has an overall effect on the physical and aesthetic value of the applicant's property and adjacent property.

(3)
Whether the proposed removal would constitute a significant change in the screening between existing or proposed buildings on contiguous lots.

~~**(4)**~~
~~Whether more than 50% up to a maximum of three of the protected trees (which does not include dead trees) in the setback area have been or will be removed in a twelve-month period.~~

(4~~5~~)
Whether the tree management plan is adequate to insure the safety and health of any protected trees and all street trees.

(5~~6~~)
Whether the proposed cutting or removal would impair the growth and development of the remaining trees on the applicant's property or adjacent property.

(6~~7~~)
Whether the proposed ~~cutting or~~ removal would change existing drainage patterns.

(7~~8~~)
Whether the proposed removal would ~~allow~~ increase soil erosion or ~~increase~~ dust.

(8~~9~~)
Whether the proposed removal would constitute a horticulturally advantageous thinning of an existing overgrown area.

(9) Whether the proposed removal would impair the canopy cover on applicant's property or the neighborhood.

(10)

Whether existing conditions or proposed changes in the topography of the area where such protected tree or trees are located have depressed land configuration or fill of land which shall be deemed injurious to the protected trees or other trees located nearby so as to require welling, construction of an aerification system, or tree removal or replacement.

(11)

Whether the protected tree or trees are dying, diseased, or severely damaged, or the angle of growth makes them a hazard to structures, roads, or human life.

(12)

Whether the presence of the protected tree or trees is likely to cause hardship or will endanger the public or an adjoining property owner by reason of it being fatally diseased, ~~or~~ dead, ~~,~~ high hazard or for some other adequate reason with the intent of this article.

E.

Neighbor notification. No permit shall be issued or Tree Management Plan approved until 14 calendar days after a copy of the Tree Management Plan or application for a tree removal permit has been delivered to each affected neighbor, except as specified in § **102-36A(1)**, in order to give each such owner an opportunity to consult with the applicant, take other steps on his or her own property to protect potentially affected trees, and provide written comments on the setback tree management plan or tree removal permit to the Borough Manager within 14 calendar days of delivery. Such delivery to each affected neighbor may be made by hand or by certified mail at the address of the property owner as shown on the current tax duplicate. If by certified mail, such delivery shall be deemed complete upon mailing. Prior to permit issuance, the applicant shall provide a signed affidavit of service attesting that such delivery has been completed as required.

§ 102-37**Fees~~, violations and penalties~~.**

~~A.~~

~~Fees. Each applicant for a tree removal permit under § 102-36 shall make a nonrefundable deposit with the Borough Manager of a fee of $250 per tree removed. No fee is required for the removal of 50% of the trees from the setback area up to a maximum of three trees in a twelve-month period.~~

A. ~~[Amended 7-23-2007 by Ord. No. 13-07]~~Application.

(1)

No application fee is required at time of filing the tree removal application with the Borough.

(2)

The replacement fee will be in accordance with § **102-38**.

B.

Tree Escrow Fund.

(1)

A Tree Escrow Fund shall be established and maintained by the Chief Financial Officer of the Borough of Mountain Lakes to receive and disburse replacement tree contributions. Appropriations from the Tree Fund shall be authorized by the Borough Council with consideration of the Shade Tree Commission recommendation in accordance with the municipal tree planting plan.

(2)

The primary purpose of said fund is to provide for the planting and maintenance of trees and shrubs on public property. The fund will also cover administrative costs to implement the provisions of this chapter, including but not limited to site inspections, processing of permits and supervision of tree replacements. Administrative costs imposed in accordance with this chapter shall not exceed 30% of the fund, as determined on an annual basis.

§ 102-38 **Replacement trees.**

A.

Tree replacement schedule.

(1)

Any tree removed pursuant to this chapter, except those exempt under the provisions of 102-39E shall be replaced on the homeowner's property or through payment to the Tree Escrow Fund based on the following:

Number of Trees to be Removed	Size/Diameter (inches)	Number of Replacement Trees	Size of Replacement Trees	Or Dollar Amount
1	Greater than 6 up to 12	1	2 to 2 1/2	$500
1	Greater than 12 up to 24"	2	2 " or greater	$1000
1	Greater than 24	3	2" or greater	$1500

Number of Trees to be Removed	Size/Diameter (inches)	Number of Replacement Trees	Size of Replacement Trees	Or Dollar Amount

(2)

In cases where the tree cost requirement criteria is combined with other criteria of this subsection, the value of proposed shade, ornamental, evergreen and shrub material shall be deducted from the calculated amount for replacement trees. The value of the proposed landscape material shall be calculated based upon average local material costs for planting.

B.

The applicant will receive a one-for-one replacement tree credit should stands of 10 or more trees greater than four inches in diameter be preserved within the limit of the disturbance line.

C.

All replacement trees shall be planted on site in accordance with the foregoing. However, if one or more of the following conditions exist, some or all of the replacement trees may be planted off site:

(1)

The site in question cannot physically accommodate the total replacement amount of trees, and the applicant contributes an amount equal to the calculated monetary value of nonreplaced trees to the Tree Escrow Fund; or

(2)

The Borough Tree Specialist and applicant agree in writing that the applicant shall make payment to the Tree Escrow Fund based upon the chart provided; or

(3)

The Borough Tree Specialist and applicant agree in writing that the applicant shall plant replacement trees off site on municipally owned property pursuant to the municipal tree planting plan.

D.

Notwithstanding the tree replacement fee schedule in Subsection A above, in all commercial and industrial applications, the tree replacement fee shall be $25 per tree, with a maximum amount of $2,500 per acre.

102-39 Tree Replacement

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Any tree removed pursuant to a tree removal permit shall be replaced within 12 months of the tree removal(s) as provided below, unless said tree is located in an exempt area, is dead, fatally diseased or a hazard as determined by a certified tree expert, or tree replacement payment is made pursuant to § 102-38A. Tree replacement shall be required in accordance with the standards set forth in ANSI Z60.1, American Standard for Nursery Stock. Tree replacement shall be in accordance with either Subsection A, B, C or D below or a combination of Subsections A, B, C and D.

A.

One-to-one tree replacement. For each tree six inches in DBH or greater that is removed, the applicant shall prepare a replanting plan for other areas of the property. The replacement plan or landscape plan shall reflect a one-to-one tree replacement for each tree six inches or greater to be removed. All proposed replacement trees shall be species native to Morris County, NJ, as listed by the Native Plant Society of New Jersey, and submitted for review and approval prior to the issuance of a tree removal permit.

B.

Credits. The permit applicant will receive a one-to-one replacement tree credit:

(1)

For stands of 10 or more trees with a DBH of six inches or greater preserved within the limit of the disturbance line; or

(2)

Forested areas of one acre or greater, which are left natural and conveyed to the Borough with a deed restriction that they will remain forested and undeveloped. This conveyance excludes all previous dedicated easements.

C.

All replacement trees shall be planted on site, unless all of the replacement trees cannot be physically accommodated. In such instance, the applicant shall pay the tree replacement fee in accordance with the schedule in § 102-38A.

E.

Exempt areas.

(1)

In all commercial, industrial and nonresidential developments, with a proposed buildable lot area less than 40,000 square feet, up to 50% of the lot area may be exempt area. For development with a proposed buildable area of 40,000 square feet or greater, up to 20,000 square feet in area may be exempt area. The exempt area shall be calculated as a contiguous, circular area from a fixed point within the footprint of the existing or proposed primary structure on the property. The exempt area should be calculated to minimize any adverse environmental impacts.

(2)

Utility line clearance operations, provided that such plan is filed with the Tree Specialist and work performed in accordance with ANSI A300 Part 7: BMP Utility Pruning of Trees, and Board of Tree Experts Pruning Standards for Shade Trees, Section 5.5.

102-40 License Required

All contractors offering tree care services for hire within the Borough of Mountain Lakes shall register annually with the Borough, provide a current certificate of insurance showing evidence of employer liability and workers' compensation coverage for the work to be performed, and shall comply with applicable OSHA regulations, ANSI Z133.1 Safety Standards, New Jersey Board of Tree Experts Pruning Standards for Shade Trees and ANSI A300 Practice Standards.

B. 102-41 Violations and Penalties

Violations and penalties for § **102-35**. Any person violating any provision of § **102-35** shall be subject to penalties up to the amount provided in Article **III** of Chapter **1** of this Code, as amended and supplemented. Each tree or shrub illegally removed or damaged shall be a separate violation. Notwithstanding, the Borough or court may reduce the penalties and suspend the imprisonment and community service in the event the violator shall agree as follows:

[Amended 4-24-2006 by Ord. No. 05-06]

(1)

To abate the violation by replacing at his sole expense the tree or trees damaged or destroyed, as shall be determined by the Shade Tree Commission;

(2)

To reimburse the Borough for all reasonable charges of the enforcing authority, Council, Shade Tree Commission and Borough Attorney;

(3)

In exercising the authority established hereby, for any tree or shrub upon any Borough street, right-of-way, highway, public place and park, the Shade Tree Commission shall:

(a)

Require that, for each tree damaged or destroyed, the violator plant a replacement tree or trees as specified by the Shade Tree Commission. The number of replacement trees required shall be based on the diameter of the damaged or destroyed tree(s) measured 4.5 feet from the ground. If the tree(s) has been cut to a height of less than 4.5 feet, or to ground level, then the diameter of the remaining stump(s) shall be used to determine the number of replacement trees required. If the tree and stump have been removed entirely, the last recorded diameter entered into the Street Tree Inventory Database shall be used to determine the number of replacement trees required. If there is a multiple-trunk tree, then each trunk's diameter shall be measured and added together to determine the total diameter of the damaged or destroyed tree. In all cases, the number of replacement trees shall be determined by this formula: one replacement tree of no less than 2.5 to three inches in diameter measured one foot above planting level for every two inches of diameter of damaged or destroyed tree, unless otherwise approved by the Shade Tree Commission.

(b)

Direct that replacement trees be planted near the location of damaged or destroyed trees and otherwise throughout the Borough.

(c)

Require that the violator provide a maintenance guaranty of the survival and normal healthy development of replacement trees for a period of three years in an amount equal to 120% of the cost of replacement trees in accordance with § **102-35C**.

C.

Violations and penalties for § **102-36**. Any person violating any provision of § **102-36** shall be subject to penalties up to the amount provided in Article **III** of Chapter **1** of this Code, as amended and supplemented. Each protected tree illegally removed or damaged shall be a separate violation. Notwithstanding, the Borough or court may reduce the penalties and suspend the imprisonment and community service in the event the violator shall agree as follows:

[Amended 4-24-2006 by Ord. No. 05-06]

(1)

To abate the violation by replacing at his sole expense the tree or trees damaged or destroyed, as shall be determined by the Borough Manager;

(2)

In exercising the authority established hereby for any protected tree, the Borough Manager shall:

(a)

Require that, for each protected tree damaged or destroyed, the violator plant a replacement tree as specified by the Borough Manager.

(b)

Direct that replacement trees be planted near the location of damaged or destroyed trees.

(c)

Require that the violator provide a maintenance guaranty of the survival and normal healthy development of replacement trees for a period of three years in an amount equal to 120% of the cost of replacement trees in accordance with § **102-35C**.

(3)

To reimburse the Borough for all reasonable charges of the enforcing authority, Council and Borough Attorney.

D.

Enforcement. No person shall prevent, delay or interfere with any lawful work undertaken by the Shade Tree Commission or the Borough's authorized agent. The Code Enforcement Official of the Borough of Mountain Lakes and, in his absence, the Borough Manager are designated as the enforcing agent for this article. The enforcing agent may order any tree work, or other activity that is carried on in violation of any decision or any provision of this article, to be stopped forthwith. The order shall be issued in writing and a copy served upon any person engaged in tree work or other activity, the applicant and the owner of the lot. Except for such work as is necessary to remedy the violation, any further work shall comply with the terms and conditions of the decision and of this article.

E.

Liability. Nothing in this article shall be deemed to impose any liability upon the Borough or its officers or employees or agents or upon the Shade Tree Commission or any of its members. Nothing in this article shall be deemed to relieve the owner and/or occupant of any private property from the duty to keep trees and shrubs thereon in a safe condition.

Telephone 973-334-3131 Fax 973-402-5595

Borough of Mountain Lakes
Mountain Lakes, NJ 07046

September 30, 2019

TO: Borough Council

FROM: Cynthia Shaw, Planning Board Administrator

The Planning Board conducted its regular meeting on September 26, 2019 during which time it reviewed the proposed changes, suggested by the ad-hoc subcommittee of the Economic Development Committee, to the permitted and conditional uses in Zone-B.

The Planning Board would like to make the following recommendations:

1. §245-11 A. *Permitted Uses* (6) – Satellite Dry Cleaning Establishments. The Planning Board agreed this could be handled by adding a definition of a **Drop-off Business** to the Land Use Ordinances under §40-3.

2. §245-11 C. *Conditional Uses* (2) – Hotels (b) – The Board found three stories acceptable but recommends reducing the allowed height to **45ft.** They agreed we should encourage pitched roof rather than flat roof buildings but thought 48ft a bit high.
   (e) The Board supported adding an **architectural standard** to encourage the use of architectural details to make a building façade more interesting and less boxy.

3. §245-11 C. *Conditional Uses* (3) - Automobile Service Stations – The board recommends the **Council obtain data from the DEP pertaining to gasoline spills and seek guidance from an independent environmental expert on the safety issues surrounding the same** before deciding to include gas stations in the B zone.

4. §245-11 C. *Conditional Uses* (4) – Restaurants with Drive-through Facilities – The Board is suggesting the word **restaurants** be removed from the description. This will allow other types of businesses that use drive-throughs to be included in the zone.
   (a) Remove the requirement to provide a **minimum que of six (6) vehicles**. The actual number could vary based on the business. If set it should be done with the help of a traffic engineer.

In an effort to provide factual information regarding what, if any, safety measures have been implemented over the last four decades related to underground storage tanks. We were provided the following information from the NJDEP and EPA.

The following document released in 2016 from the EPA details the minimum legal requirements related to tank safety based on the revised 2015 federal underground storage tank regulations.

EPA
United States
Environmental Protection
Agency

UPDATED 2016

Release Detection For Underground Storage Tanks And Piping: Straight Talk On Tanks

Printed on Recycled Paper

EPA 510-K-16-003
May 2016

EPA wrote this booklet for owners and operators of underground storage tanks (USTs).

This booklet describes the 2015 revised *federal* UST regulation. Many states and territories (referred to as states in this booklet) have state program approval from EPA. To find a list of states with state program approval, see www.epa.gov/ust/state-underground-storage-tank-ust-programs.

If your UST systems are located in a state *with* state program approval, your requirements may be different from those identified in this booklet. To find information about your state's UST regulation, contact your implementing agency or visit its website. You can find links to state UST websites at www.epa.gov/ust/underground-storage-tank-ust-contacts#states.

If your UST systems are located in a state *without* state program approval, both the requirements in this booklet and the state requirements apply to you.

If your UST systems are located in Indian country, the requirements in this booklet apply to you.

Free Publications About UST Requirements

Download or read *Release Detection For Underground Storage Tanks And Piping: Straight Talk On Tanks* on EPA's underground storage tank (UST) website at www.epa.gov/ust. Order printed copies of many, but not all, of our documents from the National Service Center for Environmental Publications (NSCEP), EPA's publication distributor: write to NSCEP, Box 42419, Cincinnati, OH 45242; call NSCEP's toll-free number 800-490-9198; or fax your order to NSCEP 301-604-3408.

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Disclaimer

This document provides information about the 2015 federal underground storage tank (UST) system requirements. The document is not a substitute for U.S. Environmental Protection Agency regulations nor is it a regulation itself — it does not impose legally binding requirements.

For regulatory requirements regarding UST systems, refer to the federal regulation governing UST systems (40 CFR part 280).

Do You Have Questions About Release Detection?

As an owner or operator of underground storage tanks (USTs) storing petroleum:

- Do you understand the basic release detection requirements for USTs?
- Do you need help choosing the best release detection method for your USTs?

These are important questions, because your UST and its underground piping must have release detection in order to comply with federal law.

This booklet begins with an overview of the federal regulatory requirements for release detection. Your implementing agency may have additional regulations, which apply to your system. Check your implementing agency requirements to ensure you are in compliance.

Throughout this document, bold type and orange updated boxes indicate new requirements in the 2015 UST regulation.

Each following section focuses on one release detection method for tanks or the requirements for piping. You will find answers in this booklet to many basic questions about how release detection methods work and which methods are best for your UST site.

Why Is Release Detection Important?

As of September 2015, over 528,000 UST releases were confirmed since the UST program was implemented. At sites without release detection, contamination can spread undetected, requiring difficult and costly cleanups.

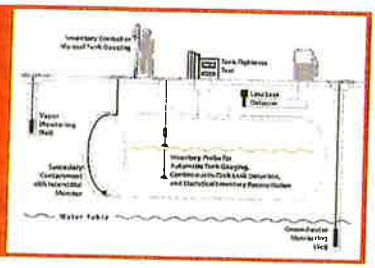
If you have effective release detection, you can respond quickly to signs of releases. You can minimize the extent of or eliminate potential for environmental damage and the threat to human health and safety. Early action also protects you from high costs that can result from cleaning up extensive releases and responding to third-party liability claims.

State or local regulations may differ from the federal requirements. Contact your implementing agency at www.epa.gov/ust/underground-storage-tank-ust-contacts#states.

If your USTs do not meet the release detection requirements described in this booklet, you can be cited for violations and fined.

For an overview of all the federal UST requirements, see EPA's *Musts For USTs*. You can download a copy at www.epa.gov/ust.

An Overview Of Release Detection Requirements



All federally regulated USTs must have a release detection method, or combination of methods, that:

- Can detect a release from any portion of the tank and the connected underground piping that routinely contains product, and
- Is installed and calibrated according to the manufacturer's instructions.

UPDATED

Tanks and piping installed or replaced after April 11, 2016 must be secondarily contained and use interstitial monitoring, except for suction piping that meets requirements discussed on page 33.

All UST owners and operators must monitor their tanks and piping at least once every 30 days. This booklet may use the terms monthly or month and annually or annual. These terms mean at least once every 30 days and not to exceed 365 days, respectively.

For tanks installed on or before April 11, 2016, you can use any of these release detection methods:

- Secondary containment with interstitial monitoring
- Automatic tank gauging systems (performing in-tank static tests)
- Continuous in-tank leak detection
- Statistical inventory reconciliation
- Tank tightness testing with inventory control
- Manual tank gauging
- Groundwater monitoring
- Vapor monitoring
- Other methods meeting performance standards or approved by implementing agency

For underground piping installed on or before April 11, 2016, you may use any of the release detection methods listed above that are appropriate for piping or conduct periodic line tightness testing. See page 33 for piping release detection requirements.

All pressurized underground piping connected to your USTs must also have automatic line leak detectors.

For Owners Of Field-constructed Tanks Or Airport Hydrant Systems

The 2015 UST regulation removes the deferral for field-constructed tanks and airport hydrant systems, making them subject to the UST requirements. These systems are not covered in this booklet due to their uniqueness. For information on the requirements for field-constructed tanks and airport hydrant systems, see EPA's website at www.epa.gov/ust/field-constructed-tanks-and-airport-hydrant-systems-2015-requirements.

UPDATED

UST systems that store fuel solely for use by emergency power generators must meet release detection requirements as follows:

- **Systems installed on or before October 13, 2015 must use any of the applicable release detection methods listed above no later than October 13, 2018.**
- **Systems installed between October 13, 2015 and April 11, 2016 must use any of the applicable release detection methods listed above beginning at installation.**
- **Systems installed or replaced after April 11, 2016 must meet secondary containment requirements with interstitial monitoring as release detection.**

EPA's Operating and Maintaining Underground Storage Tank Systems at www.epa.gov/ust/operating-and-maintaining-underground-storage-tank-systems-practical-help-and-checklists provides additional information about operation and maintenance.

UPDATED

To make sure your release detection equipment is working properly, you must begin doing the following no later than October 13, 2018:

- **Test your release detection equipment annually.**
- **Conduct walkthrough inspections every 30 days to visually check your release detection equipment and maintain applicable records of those checks.**
- **Conduct annual walkthrough inspections to visually check containment sumps and hand-held release detection equipment, such as tank gauge sticks and groundwater bailers.**

Release means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into groundwater, surface water, or subsurface soils.

UPDATED

EPA revised the definition of release detection in the 2015 UST regulation. The definition clarifies that regulated substances entering into the interstitial space are leaks instead of releases. According to the 2015 UST regulation, a release always reaches the environment.

UPDATED

The revised definition allows continued use of the term release detection as it applies to both releases and leaks. More importantly, the 2015 secondary containment with interstitial monitoring requirement makes it necessary to clarify how the terms release and leak are used, because product escaping the primary containment may not necessarily reach the environment.

Release detection means determining whether a release of a regulated substance has occurred from the UST system into the environment or a leak has occurred into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

Releases and leaks have different investigation and reporting requirements. For information on addressing suspected releases, see EPA's *Musts for USTs* at www.epa.gov/ust/musts-usts.

Look For Proof That Performance Requirements Are Met

The federal UST regulation requires that your release detection equipment meet specific performance requirements. Performance

claims and means by which performance was determined must be described in writing by either the equipment manufacturer or installer. At the request of equipment manufacturers, most release detection equipment and methods available in the United States have been evaluated by a third party, who is independent of the manufacturer or vendor of the release detection system. The evaluation shows that a release detection system can work as designed. Evaluations follow recommended evaluation procedures and testing and often take place at a testing facility. EPA and third parties developed evaluation procedures for all release detection methods.

You may use any technology, as long as it meets a performance standard of detecting a leak of 0.2 gallons per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Implementing agencies can approve another method if you demonstrate that it works as well as one of the methods listed in this booklet and you comply with any condition the agency imposes.

Although not mandated by federal UST requirements, many implementing agencies prefer, and some require, third party evaluation of release detection equipment and methods. Check with your implementing agency to determine what is acceptable. Although an evaluation and its resulting documentation are technical, you should be familiar with the evaluation's report and its results form. You may obtain this documentation from the release detection manufacturer and should keep it on file. Whether by the manufacturer, installer, or third party evaluation, performance claims determinations contain a signed certification that the system performed as described, as well as documentation of proper monitoring or testing procedures and any limitations of the system. This information is important to your compliance with UST requirements. For example, if a tank tightness test was evaluated and you have documentation only for tests taking two hours or more, then your UST must be tested for at least two hours or it would fail to meet the release detection requirements.

Perform release detection according to documented procedures.

The National Work Group on Leak Detection Evaluations (NWGLDE) – an independent group – maintains a list of release detection equipment whose third-party-conducted documentation has been reviewed by the group. The list contains a detailed summary of specifications for over 390 release detection systems. Although you can use the list to help select systems and determine their compliance or acceptability, it does not consist of approved release detection systems. Approval or acceptance of release detection systems rests with your implementing agency, which in most cases is your state environmental agency. See NWGLDE's list at www.nwglde.org.

Required Probabilities For Certain Release Detection Methods

The federal UST regulation requires that release detection methods be able to detect certain leak rates consistently. Methods must detect the specified leak rate with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. This means that, of 100 tests of USTs leaking at the

specified rate, at least 95 of them must be correctly detected. It also means that, of 100 tests of non-leaking USTs, no more than 5 can be incorrectly called leaking.

Not all release detection methods must meet required probabilities. The requirement applies to all tank release detection methods except for secondary containment with interstitial monitoring and groundwater and vapor monitoring. It also applies to automatic line leak detectors and line tightness testing.

Keep Release Detection Records

For each release detection method you use, you must keep these written records:

- Proof that performance claims are met and the means by which performance was determined by either the equipment manufacturer or installer and probabilities of detection and false alarm are met. Retain these records for five years or another period determined by your implementing agency.
- Results of any sampling, testing, or monitoring. Retain these results for one year or another period determined by the implementing agency. Retain tank tightness test results until the next test is conducted.
- All calibration, maintenance, and repair of release detection equipment permanently located on-site. Retain records for one year after servicing work is completed or another period determined by your implementing agency.
- Schedules of required calibration and maintenance provided by equipment manufacturers. Retain the schedules for five years from the date of installation.
- UPDATED **Other records may be required and are discussed, as applicable, for individual release detection methods.**

Keep Records Demonstrating Compatibility

UPDATED **The 2015 UST regulation includes additional requirements to help owners and operators demonstrate that each UST system is compatible with certain regulated substances before storing them. If you store regulated substances containing greater than 10 percent ethanol or greater than 20 percent biodiesel, or any other regulated substance identified by your implementing agency, you must keep records demonstrating compatibility of the UST system, including release detection equipment, for as long as the UST system stores the regulated substance. For more information on compatibility requirements, see EPA's *UST System Compatibility With Biofuels* at** www.epa.gov/ust/ust-system-compatibility-biofuels.

Make sure your UST system is compatible with the substance it stores.

Responding To Alarms And Other Suspected Releases

Alarms associated with release detection monitoring may indicate a release has occurred. An alarm incident does not necessarily have to be reported. In the event of an alarm, you must investigate,

determine, and correct the source of the alarm. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency. Check with your implementing agency to determine whether the alarm incident must also be reported.

Secondary Containment With Interstitial Monitoring

Secondary containment uses a barrier, an outer wall, or a liner around the UST or piping to provide secondary containment. Tanks can also be equipped with inner bladders that provide secondary containment.

UPDATED

Tanks and piping installed or replaced after April 11, 2016 must be secondarily contained and use interstitial monitoring. This applies to UST systems containing petroleum or hazardous substances.

Will You Be In Compliance?

When installed and operated according to the manufacturer's specifications, secondary containment with interstitial monitoring meets the federal release detection requirements for USTs. You must test for a release at least once every 30 days. Secondary containment with interstitial monitoring can also be used to detect leaks from piping. See release detection for piping requirements on page 33.

How Does The Release Detection Method Work?

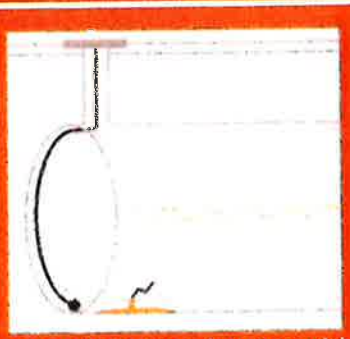
Secondary containment provides a barrier between the tank and the environment. The barrier holds the leak between the tank and the barrier so that the leak is detected. The barrier is shaped so that a leak will be directed toward the interstitial monitor. Barriers include:

- Double-walled or jacketed tanks, in which an outer wall partially or completely surrounds the primary tank;
- Internally fitted liners, such as bladders; and
- Leak proof excavation liners that partially or completely surround the tank.

Clay and other earthen materials are not considered acceptable secondary barriers.

Monitors are used to check the area between the tank and the barrier for leaks and alert the operator if a leak is suspected.

Some monitors indicate the physical presence of the leaked product, either liquid or gaseous. Other monitors check for a change in condition that indicates a hole in the tank, such as a



Secondary containment with interstitial monitoring

Replaced means:

For tanks – to remove a tank and install another tank.

For piping – to remove 50 percent or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run.

loss of vacuum or pressure, or a change in the level of a monitoring liquid, such as a brine or glycol solution, between the walls of a double-walled tank.

Monitors can be as simple as a dipstick used at the lowest point of the containment to see if liquid product has leaked and pooled there. Monitors can also be sophisticated automated systems that continuously check for leaks.

What Are The Regulatory Requirements?

You must check for a release at least once every 30 days.

The barrier must be immediately around or beneath the tank.

A double-walled system must be able to detect a leak through the inner wall.

An excavation liner must:

- Direct a leak toward the monitor;
- Prohibit the specific product stored to pass through it no faster than 10^{-6} centimeters per second;
- Be compatible with the product stored in the tank;
- Allow the UST's cathodic protection to work unaffected;
- Withstand moisture;
- Always be above the groundwater and the 25-year flood plain; and
- Have clearly marked and secured monitoring wells, if they are used.

A bladder must be compatible with the product stored and must be equipped with an automatic monitoring device.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment (including dipsticks):

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect sensors for residual build-up**
- **Ensure sensor communication with controller**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's requirements; a nationally recognized code of practice; or requirements determined by your implementing

agency to be as protective of human health and the environment.

An unexplained presence of liquid in the interstitial space of secondarily contained systems is considered an unusual operating condition. Except if the liquid in the interstitial space is used as part of the interstitial monitoring method, for example brine, if you find liquid in the interstitial space of secondarily contained systems, you must investigate, remove the liquid, and correct the source of the liquid.

You must investigate and remove any liquid in the interstitial space of secondarily contained systems, unless the liquid is part of the release detection method.

Anything Else You Should Consider?

In areas with high groundwater or a lot of rainfall, it may be necessary to select a secondary containment system that completely surrounds the tank to prevent moisture from interfering with the monitor.

This method works effectively only if the barrier and the interstitial monitor are installed correctly. Therefore, trained and experienced installers are necessary.

Automatic Tank Gauging Systems

UPDATED

In an automatic tank gauging (ATG) system, a probe permanently installed in the tank is connected to a monitor to provide information on product level and temperature. These systems calculate changes in product volume that can indicate a leaking tank. ATG systems operate in one of two modes: inventory mode and leak detection mode. In the leak detection mode, ATG systems can be set to perform a leak test on either a periodic basis or continuous basis. Leak tests set to run on a periodic basis are referred to as in-tank static tests and require the system to be taken off-line typically for between one to six hours. Leak testing set to run on a continuous basis is referred to as continuous in-tank leak detection and operates on an uninterrupted or nearly uninterrupted manner.

Will You Be In Compliance?

When installed and operated according to the manufacturer's specifications, ATG systems meet the federal release detection requirements for tanks installed on or before April 11, 2016. A leak test performed at least every 30 days is required for the tank. This method does not detect piping leaks. For piping, see release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

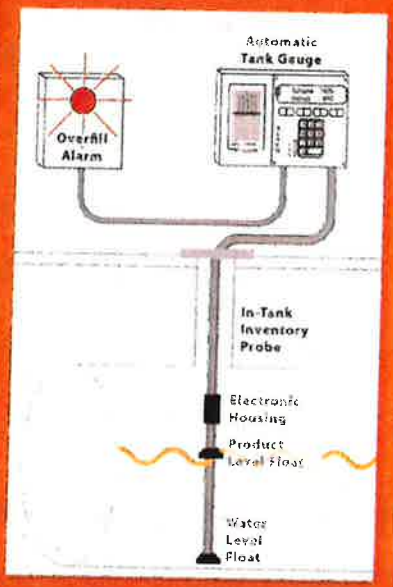
In the inventory mode:

- The product level and temperature in a tank are measured and recorded by a computer.
- ATG systems replace the use of the gauge stick to measure product level and perform inventory control. This mode records the activities of an in-service tank, including deliveries.

UPDATED

In the leak detection mode for in-tank static testing:

- **The tank is taken out of service and the product level and temperature are measured for at least one hour.**



Automatic tank gauging system

In the leak detection mode, ATG systems can be set to perform either a:

- periodic leak test, also known as an in-tank static test, or
- continuous leak test, also known as continuous in-tank leak detection.

Note: When referring to ATG systems in this booklet, we mean a system performing in-tank static testing while operating in the leak detection mode. See continuous in-tank leak detection on page 13 for ATG systems performing continuous in-tank leak detection testing while operating in the leak detection mode.

In the leak detection mode for continuous in-tank leak detection:

- **Some systems, known as continuous ATG systems, do not require the tank be taken out of service to perform a test. This is because these systems can gather and analyze data during many short periods when no product is being added to or taken from the tank.**
- **Other systems combine aspects of automatic tank gauges with statistical inventory reconciliation.**

Note: Both of these methods fall under continuous in-tank leak detection because they operate on an uninterrupted basis or pause for milliseconds to gather and record data for continual analysis of the tank's leak status. See page 13 for more information about these methods.

What Are The Regulatory Requirements?

ATG systems must be able to detect a leak of at least 0.2 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Some ATG systems can also detect a leak of 0.1 gallon per hour with the probabilities listed above.

You must obtain a conclusive pass or fail result within the 30 day monitoring period. If the test report is inconclusive, you must use another method of release detection for that 30 day monitoring period. An inconclusive result means you have not performed release detection for that 30 day period.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly:

- **Verify the system configuration**
- **Test alarm operability and battery backup**
- **Inspect probes and sensors for residual build-up**
- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's requirements; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank, you

must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

UPDATED

ATG systems have been used primarily on tanks containing gasoline or diesel. If considering using an ATG system for larger tanks or products other than gasoline or diesel, discuss its applicability with the equipment manufacturer or installer. Check the method's documentation to confirm that it will meet regulatory requirements and your needs.

With the exception of some continuous ATG systems evaluated to perform on manifolded tanks, each tank at a site must be equipped with a separate probe. Check the method's documentation to determine if the ATG system can be used with manifolded tanks. For more information, see continuous in-tank leak detection requirements on page 13. The ATG system probe is connected to a console that displays product level information and the results of the monthly test. Printers can be connected to the console to record this information.

The ATG system probe is installed through an opening, which is different than the fill pipe, on the top of the tank.

ATG systems are often equipped with alarms for high and low product level and high water level.

For ATG systems used for static release detection testing, no product can be delivered to the tank or withdrawn from it for one to six hours before the monthly test or during the test, which generally takes one to six hours. These times vary depending on the specific ATG system model. Check with your equipment manufacturer or installer. You may also find information on your ATG system on NWGLDE's list of release detection evaluations at www.nwglde.org.

ATG systems can be linked with computers at remote locations, from which the system can be programmed or read.

An ATG system can be programmed to perform a test more often than once every 30 days. EPA recommends this practice.

Some ATG systems may be evaluated to test at relatively low capacities, for example, 25 percent or 30 percent. Although the product level at such capacities may be valid for the test equipment, it may not appropriately test all portions of the tank that routinely contain product. The ATG leak test must be run and tank tested at the capacity to which it is routinely filled.

Continuous In-Tank Leak Detection

UPDATED

The 2015 federal UST regulation added continuous in-tank leak detection (CITLD) as a release detection method and establishes requirements for its operation and maintenance. CITLD encompasses all statistically based methods where the system incrementally gathers measurements on an uninterrupted or nearly uninterrupted basis to determine a tank's leak status.

Will You Be In Compliance?

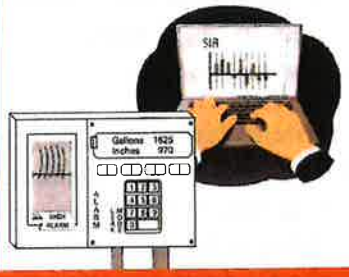
You can use CITLD methods for tanks installed on or before April 11, 2016. The system incrementally gathers measurements to determine a tank's leak status within the 30-day monitoring period. Some methods address pipelines and have been verified to meet pipeline performance standards. These methods are capable of meeting the pipeline release detection requirements. See release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

There are two major groups that fit into this category: continuous statistical release detection, also referred to as continuous automatic tank gauging methods, and continual reconciliation. Both groups typically use sensors permanently installed in the tank to obtain inventory measurements. They are combined with a microprocessor in the ATG system or other control console that processes the data. Continual reconciliation methods are further distinguished by their connection to dispensing meters that allow for automatic recording and use of dispensing data in analyzing tanks' leak status.

What Are The Regulatory Requirements?

CITLD operates on an uninterrupted basis or operates by allowing the system to gather incremental measurements to determine the release status of the tank at least once every 30 days.



Continuous in-tank leak detection

CITLD must be able to detect a leak at least 0.2 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Some CITLD methods can also detect a leak of 0.1 gallon per hour with the probabilities listed above.

You must obtain a conclusive pass or fail result within the 30 day monitoring period. If the test report is inconclusive, you must use another method of release detection for that 30 day monitoring period. An inconclusive result means you have not performed release detection for that 30 day period.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect probes and sensors for residual build-up**
- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

See NWGLDE at www.nwglde.org, which is a source for check ing whether your CITLD method meets regulatory performance requirements.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank you must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

UPDATED

CITLD methods may allow for monitoring larger tank capacities and higher system throughputs. However, these methods have limitations as well.

Statistical Inventory Reconciliation

UPDATED

The 2015 federal UST regulation added statistical inventory reconciliation (SIR) as a release detection method. For this method, a trained professional uses sophisticated computer software to conduct a statistical analysis of inventory, delivery, and dispensing data, which is gathered periodically and supplied regularly to the vendor.

Will You Be In Compliance?

SIR, when performed according to the vendor's specifications, meets federal release detection requirements for USTs and piping installed on or before April 11, 2016. SIR with a 0.2 gallon per hour release detection capability meets the federal requirements for monthly monitoring for tanks. SIR with a 0.1 gallon per hour release detection capability meets the federal requirements as an equivalent to tank tightness testing. If it has the capability of detecting even smaller leaks, SIR meets the federal requirements for line tightness testing as well. See release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

SIR analyzes inventory, delivery, and dispensing data collected over a period of time to determine whether or not a tank or piping is leaking a regulated substance.

Each operating day, the product level is measured using a gauge stick or other tank level monitor. You must also keep complete records of all withdrawals from the UST and all deliveries to the UST. After data have been collected for the period of time required by the SIR vendor, you provide the data to the SIR vendor.

The SIR vendor conducts a statistical analysis of the data to determine whether or not your UST system is leaking. The SIR vendor provides you with a test report of the analysis. Alternatively, you can purchase SIR software, which performs this same analysis and provides a test report from your own computer.

Some methods combine aspects of automatic tank gauges with statistical inventory reconciliation. In these methods,

You must obtain a conclusive pass or fail result within the 30-day monitoring period. If the test report is inconclusive, you must use another method of release detection for that 30-day monitoring period. An inconclusive result means you have not performed release detection for that 30-day period.

sometimes called hybrid methods, a gauge provides liquid level and temperature data to a computer running SIR software, which performs the analysis to detect leaks.

SIR methods are distinguished from continuous in-tank leak detection methods by how inventory, delivery, and dispensing data are processed; they provide a determination of the release status of the tank or piping. SIR data is processed on a periodic basis involving a separate analysis that is performed either by a SIR vendor or SIR software. Continuous statistically based in-tank release detection methods process data on an on-going, uninterrupted or nearly uninterrupted manner.

EPA's Introduction To Statistical Inventory Reconciliation For Underground Storage Tanks at www.epa.gov/ust/introduction-statistical-inventory-reconciliation-underground-storage-tanks explains how to do statistical inventory reconciliation.

What Are The Regulatory Requirements?

SIR methods must report a quantitative result with a calculated leak rate, be able to detect a leak at least 0.2 gallons per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Some SIR methods can also detect a leak of 0.1 gallons per hour with the probabilities listed above.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly:

For hand held non-electronic equipment, such as tank gauge sticks:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect probes and sensors for residual build-up**
- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

UPDATED

The SIR method must use a threshold that does not exceed one-half the minimum detectable leak rate (MDL). Pd is the probability of detection and Pfa is the probability of false alarm in a normal probability distribution. SIR data is typically analyzed through the calculation of the reportable

values of MDL and the leak declaration threshold T are related as follows:

- **MDL is always greater than T**
- **Pd = (1 – Pfa), then MDL = 2 times T (that is, the threshold is equal to ½ MDL)**

Any analysis of data indicating a threshold value greater than one-half MDL should be appropriately investigated as a suspected release.

You must keep on file for one year the test reports. You must also keep on file for five years documentation that the SIR method used for your system is capable of detecting a leak rate of 0.2 gallons per hour with a probability of detection of 95 percent and probability of false alarm.

Documentation on the method's capability of meeting performance requirements must reflect the way the method is used in the field.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank you must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

UPDATED

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

If you are considering using a SIR method, check the method's documentation to confirm that it will meet regulatory requirements and your specific UST system needs.

A SIR method's ability to detect releases declines as throughput increases. If you are considering using a SIR method for high throughput UST systems, check the method's documentation to confirm that it will meet regulatory requirements and your needs.

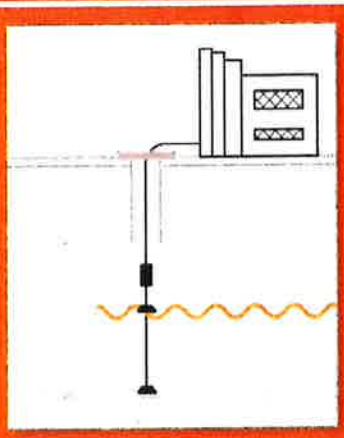
Data, including product level measurements, dispensing data, and delivery data, should all be carefully collected according to the SIR vendor's specifications. Poor data collection can produce inconclusive results and noncompliance.

The SIR vendor will generally provide forms for recording data, a calibrated chart converting liquid level to volume, and detailed instructions on conducting measurements.

SIR should not be confused with other release detection methods that also rely on periodic reconciliation of inventory, withdrawal, and delivery data. Unlike manual tank gauging or inventory control, SIR uses a sophisticated statistical analysis of data to detect releases.

Tank Tightness Testing With Inventory Control

This method combines periodic tank tightness testing with monthly inventory control. Inventory control involves taking measurements of tank contents and recording amount received and pumped each operating day, as well as reconciling all this data at least once every 30 days. Every five years, this combined method must also include a tightness test, which is a sophisticated test performed by a trained professional.



Tank tightness testing

Will You Be In Compliance?

When performed according to the manufacturer's specifications, periodic tank tightness testing combined with monthly inventory control can temporarily meet the federal release detection requirements for tanks installed on or before April 11, 2016. This method does not detect piping leaks. This combined method can be used only for 10 years after the tank was installed.

These two release detection methods must be used together because inventory control alone does not meet the federal requirements for monthly release detection for tanks. Line tightness testing, a separate type of tightness testing, is also an option for underground piping; see release detection requirements for piping on page 33.

We discuss both tank tightness testing and inventory control below. We discuss tank tightness testing first, followed by inventory control. Tank tightness testing is also used in combination with manual tank gauging as described on page 24. In addition, tank tightness testing may be used to investigate a suspected release.

Tank Tightness Testing

How Does The Release Detection Method Work?

Tightness tests, also referred to as precision tank tests, include a variety of methods. These methods are divided into two categories: volumetric and nonvolumetric.

Volumetric test methods generally involve precisely measuring in milliliters or thousandths of an inch the change in product level in a tank over time. Additional characteristics of this category of tank tightness testing include:

- Changes in product temperature also must be precisely measured in thousandths of a degree at the same time as level measurements, because temperature changes cause volume changes that interfere with finding a leak.
- The product in the tank must be at a certain minimum level before testing. This often requires adding product from another tank on site or purchasing additional product.
- A net decrease in product volume, which you find by subtracting out volume changes caused by temperature, over the time of the test indicates a leak.
- A few of these methods measure properties of product that are independent of temperature, such as mass, and so do not need to measure product temperature.

There are many nonvolumetric test methods. These methods can be distinguished by what they test or which areas of the UST system they test. The methods:

- Involve acoustics that interpret an ultrasonic signal.
- Use vacuum or pressure decay with gain or loss of pressure, respectively, to determine whether there is a hole in the tank.
- Test either the wetted portion of the tank, which contains product, or the ullage, which is the unfilled portion of the tank.
- Involve tracer compounds circulated through the UST system, which test strategically placed sampling ports outside the UST system.

Although not typically done, you may use tank tightness testing to meet the monthly release detection requirement. This test must meet performance standards of 0.1 gallon per hour leak rate with probability of detection at least 95 percent and probability of false alarm not to exceed 5 percent.

Except for tracer compounds used for both volumetric and nonvolumetric test methods, the following generally apply:

- The testing equipment is temporarily installed in the tank, usually through the fill pipe.
- The tank must be taken out of service for the test.
- Some tightness test methods require the tester measure and calculate by hand. Other tightness test methods are highly

automated. After the tester sets up the equipment, a computer controls the measurements and analysis.

- Some ATG systems are capable of meeting the regulatory requirements for tank tightness testing and may be considered an equivalent method. Check with your implementing agency.

What Are The Regulatory Requirements?

The tightness test method must be able to detect a leak at least 0.1 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent.

UPDATED

No later than October 13, 2018, you must begin testing your release detection equipment annually to make sure it is working properly.

Tank tightness testing is typically performed by a qualified testing company. Qualified testing companies periodically calibrate and maintain their equipment according to applicable standards. If your implementing agency allows use of ATG systems or other system controllers for tank tightness testing, you must follow the testing procedures required for ATG systems. **See page 10.**

You must perform a tightness test at least every 5 years. You may use this combination method temporarily for up to 10 years after the UST was installed. After 10 years, you must use a different release detection method.

Under the federal UST regulation, this combination method can only be used for 10 years after the tank was installed. However, most states have secondary containment with interstitial monitoring requirements. Therefore, you may not be able to use this combination method. Check with your implementing agency.

Anything Else You Should Consider?

For most methods, a testing company performs the test. You should observe the test.

Depending on the method, tank tightness testing can be used on tanks of varying capacity and tanks containing gasoline and diesel. Many test methods have limitations on the capacity of the tank or the amount of ullage, which is the unwetted portion of the tank that should not be exceeded. Methods that use tracer chemical analysis do not have limitations on tank capacity. If you are considering using tightness testing for products other than gasoline or diesel, discuss the method's applicability with the manufacturer's representative. Check the method's documentation to confirm that it will meet regulatory requirements and your specific UST system needs.

Manifolded tanks generally should be isolated and tested separately.

Procedure and personnel, not equipment, are usually the most important factors in a successful tightness test. Therefore, well-

trained and experienced testers are very important. Some implementing agencies have tester certification programs.

Inventory Control

How Does The Release Detection Method Work?

Inventory control requires frequent measurements of tank contents and math calculations that let you compare your stick inventory, which is what you measured, to your book inventory, which is what your recordkeeping indicates you should have. Some people call this process inventory reconciliation. If the difference between your stick and book inventory is too large, your tank may be leaking.

EPA's Doing Inventory Control Right at www.epa.gov/ust/doing-inventory-control-right-underground-storage-tanks explains how to do inventory control. The booklet also contains standard recordkeeping forms.

UST inventories are determined each operating day by using a gauge stick and recording the data on a form. The level on the gauge stick is converted to a volume of product in the tank using a calibration chart, which is often furnished by the UST manufacturer.

The amounts of product delivered to and withdrawn from the UST each operating day are also recorded. At least once every 30 days, the gauge stick data and the sales and delivery data are reconciled and the month's overage or shortage is determined. If the overage or shortage is greater than or equal to 1 percent of the tank's flow-through volume plus 130 gallons of product, the UST may be leaking.

What Are The Regulatory Requirements?

Inventory control must be used in combination with tank tightness testing performed at least every 5 years to meet the monthly release detection requirement. This combination method can only be used for up to 10 years after the tank was installed. This method may not be used for UST systems installed after April 11, 2016.

You may need to get a corrected tank chart if your tank is not level.

The gauge stick must reach the bottom of the tank and be marked so that the product level can be determined to the nearest one-eighth of an inch. A monthly measurement must be taken to identify any water in the tank.

Product dispensers must be calibrated to the applicable weights and measures standards.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment, such as tank gauge sticks:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank you must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

UPDATED

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

The accuracy of tank gauging can be increased by spreading product finding paste on the gauge stick before taking measurements or by using in tank product level monitoring devices.

Inventory control is a practical, commonly used management practice that does not require closing down the tank operation for long periods.

Manual Tank Gauging

Manual tank gauging requires keeping the tank undisturbed for at least 36-58 hours each week, during which the contents of the tank are measured twice at the beginning and twice at the end of the test period. At the end of each week, you compare the results to the standards shown on page 25 to see if your tank is leaking.

Will You Be In Compliance?

Manual tank gauging can be used only on tanks containing 2,000 gallons or less. Tanks containing 1,000 gallons or less can use this method alone, if they meet specified diameter requirements discussed below. Tanks from 1,001 to 2,000 gallons, and tanks between 551 and 1,000 gallons that do not meet the specified diameters, can temporarily use manual tank gauging when it is combined with tank tightness testing. Under the federal UST regulation, this combined method can be used only for 10 years after the tank was installed. This method may not be used for UST systems installed after April 11, 2016.

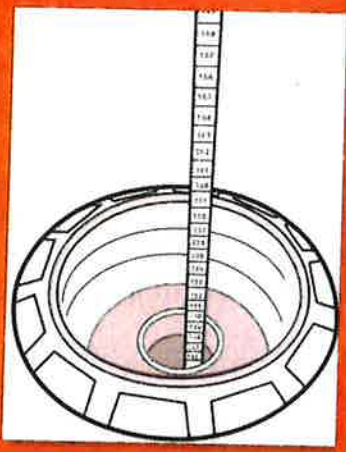
Manual tank gauging detects leaks only from tanks; this method does not detect piping leaks. For requirements for piping, see release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

You must take four measurements of the tank's contents, two at the beginning and two at the end of a 36-58 hour period, during which nothing is added to or removed from the tank. See the table on page 25.

The average of the two consecutive ending measurements are subtracted from the average of the two beginning measurements to indicate the change in product volume.

Every week, you compare the calculated change in tank volume to the standards shown in the table on page 25. If the calculated change exceeds the weekly standard, the UST may be leaking. Also, you must compare the averages of the four weekly test results to the monthly standard in the same way. See the table below.



Manual tank gauging

EPA's *Manual Tank Gauging For Small Underground Storage Tanks* at www.epa.gov/ust/manual-tank-gauging-small-underground-storage-tanks explains how to do manual tank gauging correctly and contains standard recordkeeping forms.

What Are The Regulatory Requirements?

You must take liquid level measurements with a gauge stick that is marked to measure the liquid to the nearest one-eighth of an inch.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment, such as tank gauge sticks:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

You must perform these activities according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

Manual tank gauging may be used as the sole method of release detection for tanks with a capacity of 550 gallons or less and capacities between 551 and 1,000 gallons with a 48 inch or 64 inch diameter. All other tanks using manual tank gauging must combine the method with tank tightness testing. **These tanks may use the combined method for up to 10 years after installation. After 10 years, you must use another release detection method.** See the other sections of this booklet for allowable monthly monitoring methods.

Under the federal UST regulation, you may only use this combination method for 10 years after the tank was installed. However, most states have secondary containment with interstitial monitoring requirements. Therefore, you may not be able to use this combination method. Check with your UST implementing agency.

Table Of Test Standards For Manual Tank Gauging

Tank Size	Minimum Duration Of Test	Weekly Standard (1 test)	Monthly Standard (4-test average)
Up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when tank diameter is 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (when tank diameter is 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (also requires periodic tank tightness testing)	36 hours	13 gallons	7 gallons
1,001-2,000 gallons (also requires periodic tank tightness testing)	36 hours	26 gallons	13 gallons

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank, you

must investigate and correct the source of the water. You must report suspected releases to your implementing agency within 24 hours or the period specified by your implementing agency.

Anything Else You Should Consider?

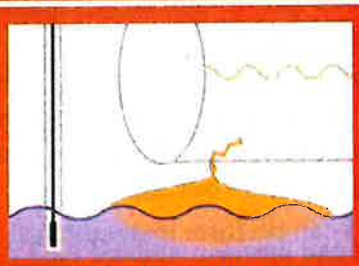
Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

UPDATED

You can perform manual tank gauging yourself. Correct gauging, recording, and correct math are the most important factors for successful tank gauging. The accuracy of manual tank gauging can be increased by spreading product-finding paste on the gauge stick before taking measurements.

Groundwater Monitoring

Groundwater monitoring detects the presence of liquid product floating on the groundwater near the tank and along the piping runs. To discover if released product has reached groundwater, these wells can be checked periodically using hand-held equipment or continuously with permanently installed equipment.



Groundwater monitoring

Will You Be In Compliance?

When installed and operated according to the manufacturer's instructions, a groundwater monitoring system can meet the federal release detection requirements for USTs and piping installed on or before April 11, 2016. Monitoring of a groundwater monitoring system is required at least once every 30 days for the tank.

UPDATED

No later than October 13, 2018, if you use groundwater monitoring, you must begin keeping records of a site assessment, for as long as you use this method, showing that the monitoring system is installed properly. Site assessments performed after October 13, 2015 must be signed by a licensed professional.

How Does The Release Detection Method Work?

Groundwater monitoring involves the use of permanent monitoring wells placed close to the UST, with the wells extending below the groundwater level. The wells are checked at least every 30 days for the presence of product that has leaked from the UST and is floating on the groundwater.

The two main components of a groundwater monitoring system are the monitoring wells, which are typically at least 4 inches in diameter, and the monitoring device.

Electronic detection devices may be permanently installed in the well for automatic, continuous measurements for released product.

Manual devices range from a bailer, which collects a liquid sample for visual inspection, to a device that can be inserted into the well to electronically indicate the presence of leaked

product. Manual devices must be used to check each monitoring well at least once every 30 days.

Before installation, a site assessment is necessary to determine the soil type, groundwater depth and flow direction, and the general geology of the site. A trained professional must perform this assessment.

The number of wells and their placement is very important. Only an experienced contractor can properly design and construct an effective monitoring well system. A minimum of two wells is recommended for a single tank excavation. Three or more wells are recommended for an excavation with two or more tanks. Some implementing agencies have developed rules for monitoring well placement.

No later than October 13, 2018, if you use vapor monitoring or groundwater monitoring, you must begin keeping records of a site assessment, for as long as you use these methods, showing that the monitoring system is set up properly. If you do not have a site assessment for your vapor monitoring or groundwater monitoring, you will need to have one conducted. Site assessments conducted after October 13, 2015 must be signed by a licensed professional.

What Are The Regulatory Requirements?

Groundwater monitoring can only be used if the stored substance does not mix with water and floats on top of water.

If groundwater monitoring is used as the sole method of release detection, the groundwater must be less than 20 feet below the surface, and the soil between the well and the UST must be sand, gravel, or other coarse materials.

Groundwater at times may be more than 20 feet from the ground surface, due to seasonal water table variations. This can result in the depth to groundwater requirement not being met.

Product detection devices must be able to detect one-eighth inch or less of leaked product on top of the groundwater.

Monitoring wells must be properly designed and sealed to keep them from becoming contaminated from outside sources.

Wells should be placed in the UST backfill so they can detect a leak as quickly as possible.

Monitoring wells must be secured and clearly marked.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment, such as groundwater bailers:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect well probes and sensors for residual build-up**

- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Test manual electronic devices, such as portable probes**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's requirements; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

Anything Else You Should Consider?

In general, groundwater monitoring works best at UST sites where:

- Monitoring wells are installed in the tank backfill; and
- There are no previous releases of product that would falsely indicate a current release.

A professionally conducted site assessment is critical for determining these site-specific conditions.

UPDATED

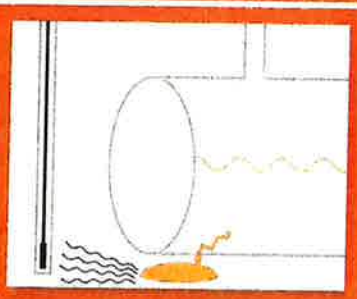
Some states may allow you to use groundwater monitoring wells to perform vapor monitoring. Check with your implementing agency to determine what is acceptable. If allowed, unless an analysis is performed and valid documentation regarding use of the wells for vapor monitoring during low water table conditions is identified in the site assessment, the wells will be restricted for groundwater monitoring only.

UPDATED

In the event of a confirmed release at an UST site, groundwater monitoring is no longer acceptable to meet the release detection requirement unless the site is remediated and a new site assessment is conducted.

Vapor Monitoring

Vapor monitoring measures either product vapors in the soil around the UST, referred to as passive monitoring, or special tracer chemicals added to the UST, referred to as active monitoring.



Vapor monitoring

Will You Be In Compliance?

When installed and operated according to the manufacturer's instructions, vapor monitoring can meet the federal release detection requirements for tanks and piping installed on or before April 11, 2016. Monitoring of a vapor monitoring system at least every 30 days is required for the tank.

UPDATED

No later than October 13, 2018, if you use vapor monitoring you must begin keeping records of a site assessment, for as long as you use this method, showing that the monitoring system is installed properly. Site assessments performed after October 13, 2015 must be signed by a licensed professional.

How Does The Release Detection Method Work?

Vapor monitoring can be categorized into two types: active monitoring and passive monitoring. Active monitoring is also referred to as chemical marker monitoring or as tracer compound analysis.

Passive monitoring detects or measures vapors from released product within monitoring wells placed in the soil around the tank to determine if the tank is releasing regulated substances.

Active monitoring samples for the presence of a tracer compound outside the UST system that was introduced in the tank or underground piping.

Fully automated vapor monitoring systems have permanently installed equipment to continuously or periodically gather and analyze vapor samples and activate a visual or audible alarm when a release is detected, independent of actions by an UST system operator.

Active monitoring requires the installation of monitoring wells or sampling points strategically placed in the tank

backfill or along pipe runs to intercept special chemicals that, in the event of a release, are detected in the sampling points.

Manually operated vapor monitoring systems range from equipment that immediately analyzes a gathered vapor sample to devices that gather a sample, which must be sent to a laboratory for analysis. Manual systems must be used at least once every 30 days to monitor a site. If active monitoring is performed, it must be done at least every 30 days by qualified technicians.

To ensure they are properly operating, vapor monitoring devices must be periodically calibrated according to the manufacturer's instructions.

Before installation of any vapor monitoring system for release detection, a site assessment is necessary to determine the soil type, groundwater depth and flow direction, and the general geology of the site. Only a trained professional can do this.

No later than October 13, 2018, if you use vapor monitoring or groundwater monitoring, you must keep records of a site assessment, for as long as you use these methods, showing that the monitoring system is set up properly. If you do not have a site assessment for your vapor monitoring or groundwater monitoring, you will need to have one conducted. Site assessments conducted after October 13, 2015 must be signed by a licensed professional.

The number of wells and their placement is very important. Only an experienced contractor can properly design and construct an effective monitoring well system. Vapor monitoring requires installation of monitoring wells within the tank backfill. A minimum of two wells is recommended for a single tank excavation. Three or more wells are recommended for an excavation with two or more tanks. Some implementing agencies have developed requirements for monitoring well placement.

What Are The Regulatory Requirements?

The UST backfill must be sand, gravel, or another material that will allow petroleum vapors or tracer compound to easily move to the monitor.

The backfill must be clean enough that previous contamination does not interfere with detecting a current release.

The substance stored in the UST must vaporize easily so that the vapor monitor can detect a release. For example, some vapor monitoring systems do not work well, if at all, with diesel fuel.

High groundwater, excessive rain, or other sources of moisture must not interfere with operation of vapor monitoring for more than 30 consecutive days.

Monitoring wells must be secured and clearly marked.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect sensors for residual build-up**
- **Test manual electronic devices, such as photoionization detectors**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

Anything Else You Should Consider?

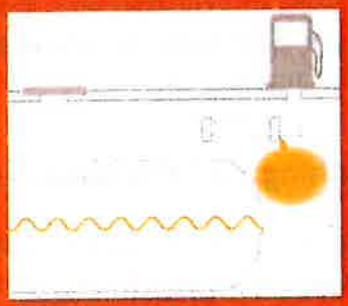
Before installing a vapor monitoring system, a site assessment must be done to determine whether vapor monitoring is appropriate at the site. A site assessment usually includes at least a determination of the groundwater level, background contamination, stored product type, and soil type. This assessment can only be done by a trained professional.

UPDATED

In the event of a confirmed release at an UST site, vapor monitoring is no longer acceptable to meet the release detection requirement unless the site is remediated and a new site assessment is conducted.

Release Detection For Underground Piping

Owners and operators of federally regulated UST systems must have a release detection method, or combination of methods for connected underground piping that routinely contains product.



Line leak detection

Will You Be In Compliance?

When installed and operated according to the manufacturer's specifications, the release detection methods discussed here meet the federal regulatory requirements for underground piping systems. Your UST may have suction or pressurized piping, which are discussed below.

UPDATED

Piping installed or replaced after April 11, 2016 must have secondary containment with interstitial monitoring, except for suction piping that meets requirements discussed below. In addition, pressurized piping must have an automatic line leak detector.

What Are The Regulatory Requirements For Suction Piping?

No release detection is required if the suction piping system has these characteristics: below-grade piping that operates under atmospheric pressure; enough slope so that the product in the pipe can drain back into the tank when suction is released; and only one check valve, which is located as close as possible beneath the pump in the dispensing unit. If a suction line is to be considered exempt based on these characteristics, there must be some way to verify that the line actually has these characteristics.

Suction piping installed on or before April 11, 2016 that does not have all of the characteristics noted above must use one of the following release detection methods:

- A line tightness test at least every three years
- Monthly interstitial monitoring
- Monthly vapor monitoring
- Monthly groundwater monitoring
- Monthly statistical inventory reconciliation

- Continuous in-tank leak detection only for methods that include pipelines
- Other monthly monitoring that meets performance standards or approved by your implementing agency

Suction lines are not pressurized very much during a tightness test of 7 to 15 pounds per square inch.

Interstitial monitoring, vapor monitoring, groundwater monitoring, continuous in-tank leak detection, and statistical inventory reconciliation have the same regulatory requirements for piping as they do for tanks. See earlier sections of this booklet for information on those methods.

UPDATED

Suction piping installed or replaced after April 11, 2016 that does not meet all of the design standards above must have secondary containment with interstitial monitoring.

What Are The Regulatory Requirements For Pressurized Piping?

Pressurized piping installed on or before April 11, 2016 must have an automatic line leak detector (ALLD) that:

- Shuts off flow, or
- Restricts flow, or
- Triggers an audible or visual alarm

The ALLD must be designed to detect a release at least 3 gallons per hour at a line pressure of 10 pounds per square inch within 1 hour, with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent.

You must also use one of these other methods:

- Annual line tightness test
- Monthly interstitial monitoring
- Monthly vapor monitoring
- Monthly groundwater monitoring
- Monthly statistical inventory reconciliation

UPDATED

- **Continuous in-tank leak detection, only for methods that include pipelines**
- Other monthly monitoring that meets performance standards or approved by your implementing agency

The line tightness test must be able to detect a leak at least 0.1 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent when the line pressure is 1.5 times its normal operating pressure. The test must be conducted each year. If the test is performed at

pressures lower than 1.5 times operating pressure, the leak rate to be detected must be correspondingly lower.

Interstitial monitoring, vapor monitoring, groundwater monitoring, continuous in-tank leak detection only for methods that include piping, and statistical inventory reconciliation have the same regulatory requirements for piping as for tanks. See earlier sections of this booklet for information on those methods.

UPDATED **Pressurized piping installed or replaced after April 11, 2016 must have secondary containment with interstitial monitoring.**

UPDATED **No later than October 13, 2018, you must begin annual operability testing of ALLDs to determine they are capable of detecting a leak of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour by simulating a leak at or below this leak rate. You must keep records of these tests for 3 years.**

The test must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

If your implementing agency allows an ALLD to meet other aspects of the pressurized piping dual release detection requirement (that is, monthly monitoring or line tightness testing), the annual operability test must be conducted to ensure the applicable performance standard can be met. Simulating a leak at 0.2 gph for monthly monitoring or 0.1 gph for line tightness testing is one way to ensure this.

How Do The Release Detection Methods Work?

ALLDs

Flow restrictors and flow shutoffs can monitor the pressure within the line in a variety of ways: whether the pressure decreases over time; how long it takes for a line to reach operating pressure; and combinations of increases and decreases in pressure.

All mechanical and electronic ALLDs must meet the annual testing requirement.

If a suspected release is detected, a flow restrictor keeps the product flow through the line well below the usual flow rate. If a suspected release is detected, a flow shutoff completely cuts off product flow in the line or shuts down the pump.

Both automatic flow restrictors and shutoffs are permanently installed directly into the pipe or the pump housing.

A continuous alarm system constantly monitors line conditions and immediately triggers an audible or visual alarm if a release is suspected. An automated interstitial monitoring system can be set to operate continuously independent of an operator and sound an alarm, flash a signal on the console, or even ring a telephone in a manager's office when a release is suspected.

A self diagnostic system does not meet the annual testing requirement, unless the system performs a simulated leak test.

UPDATED **An automated interstitial monitoring system can be combined with an automatic shutoff system so that whenever the system detects a suspected release, the product flow in the piping is completely shut down. Under other methods in 40 CFR §**

280.43(i)(2), EPA recognizes such a setup would meet the monthly monitoring requirement as well as the automatic line leak detector requirement. The following conditions must be met:

- **Sump sensors used for piping interstitial monitoring must remain as close as practicable to the bottom of interstitial spaces being monitored.**
- **Monthly monitoring records must be maintained for at least one year.**
- **Electronic and mechanical components of the system, including shutoff devices, sensors, pressure or vacuum monitors, must be tested annually for proper operation. Records of the test must be maintained for three years.**
- **Containment sumps that are part of the piping interstitial monitoring system must be tested at least once every three years for liquid tightness. Keep the results for at least three years.**

Line Tightness Testing

During a line tightness test, the line is taken out of service and usually pressurized above the normal operating pressure. A drop in pressure over time, usually an hour or more, suggests a possible leak. Suction lines are not pressurized very much during a tightness test of 7 to 15 pounds per square inch.

Most line tightness tests are performed by a testing company. You should observe the test. Some tank tightness test methods can be performed to include a tightness test of the connected piping. For most line tightness tests, no permanent equipment is installed.

In the event of trapped vapor pockets, it may be impossible to conduct a valid line tightness test. There is no way to tell definitely before the test begins if this will be a problem, but long complicated piping runs with many risers and dead ends are more likely to have vapor pockets.

Some permanently installed electronic systems, which often include electronic line leak detectors connected to an ATG system, may meet the requirements of monthly monitoring or a line tightness test.

Check with your implementing agency to determine what is allowed.

Links For More Information

Government Links

- U.S. Environmental Protection Agency's Office of Underground Storage Tanks: www.epa.gov/ust. EPA's UST compliance assistance: www.epa.gov/ust/resources-ust-owners-and-operators
- State UST program contact information: www.epa.gov/ust/underground-storage-tank-ust-contacts#states
- Tanks Subcommittee of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO): www.astswmo.org
- New England Interstate Water Pollution Control Commission (NEIWPCC): www.neiwpcc.org

Industry Codes And Standards

www.epa.gov/ust/underground-storage-tanks-usts-laws-regulations#code

Other Organizations To Contact For UST Information

http://nwglde.org/

United States Environmental Protection Agency
5401R
Washington, DC 20460

EPA 510-K-16-003
May 2016

EPA
United States
Environmental Protection
Agency

UPDATED 2016

Release Detection For Underground Storage Tanks And Piping: Straight Talk On Tanks

Printed on Recycled Paper

EPA 510-K-16-003
May 2016

EPA wrote this booklet for owners and operators of underground storage tanks (USTs).

This booklet describes the 2015 revised *federal* UST regulation. Many states and territories (referred to as states in this booklet) have state program approval from EPA. To find a list of states with state program approval, see www.epa.gov/ust/state-underground-storage-tank-ust-programs.

If your UST systems are located in a state *with* state program approval, your requirements may be different from those identified in this booklet. To find information about your state's UST regulation, contact your implementing agency or visit its website. You can find links to state UST websites at www.epa.gov/ust/underground-storage-tank-ust-contacts#states.

If your UST systems are located in a state *without* state program approval, both the requirements in this booklet and the state requirements apply to you.

If your UST systems are located in Indian country, the requirements in this booklet apply to you.

Free Publications About UST Requirements

Download or read *Release Detection For Underground Storage Tanks And Piping: Straight Talk On Tanks* on EPA's underground storage tank (UST) website at www.epa.gov/ust. Order printed copies of many, but not all, of our documents from the National Service Center for Environmental Publications (NSCEP), EPA's publication distributor: write to NSCEP, Box 42419, Cincinnati, OH 45242; call NSCEP's toll-free number 800-490-9198; or fax your order to NSCEP 301-604-3408.

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Disclaimer

This document provides information about the 2015 federal underground storage tank (UST) system requirements. The document is not a substitute for U.S. Environmental Protection Agency regulations nor is it a regulation itself — it does not impose legally binding requirements.

For regulatory requirements regarding UST systems, refer to the federal regulation governing UST systems (40 CFR part 280).

Do You Have Questions About Release Detection?

As an owner or operator of underground storage tanks (USTs) storing petroleum:

- Do you understand the basic release detection requirements for USTs?
- Do you need help choosing the best release detection method for your USTs?

These are important questions, because your UST and its underground piping must have release detection in order to comply with federal law.

This booklet begins with an overview of the federal regulatory requirements for release detection. Your implementing agency may have additional regulations, which apply to your system. Check your implementing agency requirements to ensure you are in compliance.

Throughout this document, bold type and orange updated boxes indicate new requirements in the 2015 UST regulation.

Each following section focuses on one release detection method for tanks or the requirements for piping. You will find answers in this booklet to many basic questions about how release detection methods work and which methods are best for your UST site.

Why Is Release Detection Important?

As of September 2015, over 528,000 UST releases were confirmed since the UST program was implemented. At sites without release detection, contamination can spread undetected, requiring difficult and costly cleanups.

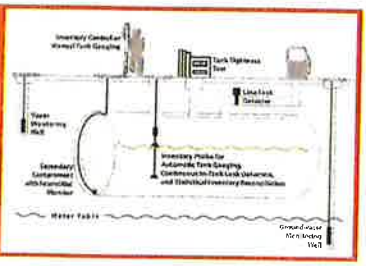
If you have effective release detection, you can respond quickly to signs of releases. You can minimize the extent of or eliminate potential for environmental damage and the threat to human health and safety. Early action also protects you from high costs that can result from cleaning up extensive releases and responding to third-party liability claims.

State or local regulations may differ from the federal requirements. Contact your implementing agency at www.epa.gov/ust/underground-storage-tank-ust-contacts#states.

If your USTs do not meet the release detection requirements described in this booklet, you can be cited for violations and fined.

For an overview of all the federal UST requirements, see EPA's *Musts For USTs*. You can download a copy at www.epa.gov/ust.

An Overview Of Release Detection Requirements



All federally regulated USTs must have a release detection method, or combination of methods, that:

- Can detect a release from any portion of the tank and the connected underground piping that routinely contains product, and
- Is installed and calibrated according to the manufacturer's instructions.

UPDATED

Tanks and piping installed or replaced after April 11, 2016 must be secondarily contained and use interstitial monitoring, except for suction piping that meets requirements discussed on page 33.

All UST owners and operators must monitor their tanks and piping at least once every 30 days. This booklet may use the terms monthly or month and annually or annual. These terms mean at least once every 30 days and not to exceed 365 days, respectively.

For tanks installed on or before April 11, 2016, you can use any of these release detection methods:

- Secondary containment with interstitial monitoring
- Automatic tank gauging systems (performing in-tank static tests)
- Continuous in-tank leak detection
- Statistical inventory reconciliation
- Tank tightness testing with inventory control
- Manual tank gauging
- Groundwater monitoring
- Vapor monitoring
- Other methods meeting performance standards or approved by implementing agency

For underground piping installed on or before April 11, 2016, you may use any of the release detection methods listed above that are appropriate for piping or conduct periodic line tightness testing. See page 33 for piping release detection requirements.

All pressurized underground piping connected to your USTs must also have automatic line leak detectors.

For Owners Of Field-constructed Tanks Or Airport Hydrant Systems

The 2015 UST regulation removes the deferral for field-constructed tanks and airport hydrant systems, making them subject to the UST requirements. These systems are not covered in this booklet due to their uniqueness. For information on the requirements for field-constructed tanks and airport hydrant systems, see EPA's website at www.epa.gov/ust/field-constructed-tanks-and-airport-hydrant-systems-2015-requirements.

UPDATED

UST systems that store fuel solely for use by emergency power generators must meet release detection requirements as follows:

- **Systems installed on or before October 13, 2015 must use any of the applicable release detection methods listed above no later than October 13, 2018.**
- **Systems installed between October 13, 2015 and April 11, 2016 must use any of the applicable release detection methods listed above beginning at installation.**
- **Systems installed or replaced after April 11, 2016 must meet secondary containment requirements with interstitial monitoring as release detection.**

EPA's Operating and Maintaining Underground Storage Tank Systems at www.epa.gov/ust/operating-and-maintaining-underground-storage-tank-systems-practical-help-and-checklists provides additional information about operation and maintenance.

UPDATED

To make sure your release detection equipment is working properly, you must begin doing the following no later than October 13, 2018:

- **Test your release detection equipment annually.**
- **Conduct walkthrough inspections every 30 days to visually check your release detection equipment and maintain applicable records of those checks.**
- **Conduct annual walkthrough inspections to visually check containment sumps and hand-held release detection equipment, such as tank gauge sticks and groundwater bailers.**

Release means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into groundwater, surface water, or subsurface soils.

UPDATED

EPA revised the definition of release detection in the 2015 UST regulation. The definition clarifies that regulated substances entering into the interstitial space are leaks instead of releases. According to the 2015 UST regulation, a release always reaches the environment.

UPDATED

The revised definition allows continued use of the term release detection as it applies to both releases and leaks. More importantly, the 2015 secondary containment with interstitial monitoring requirement makes it necessary to clarify how the terms release and leak are used, because product escaping the primary containment may not necessarily reach the environment.

Release detection means determining whether a release of a regulated substance has occurred from the UST system into the environment or a leak has occurred into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

Releases and leaks have different investigation and reporting requirements. For information on addressing suspected releases, see EPA's *Musts for USTs* at www.epa.gov/ust/musts-usts.

Look For Proof That Performance Requirements Are Met

The federal UST regulation requires that your release detection equipment meet specific performance requirements. Performance

claims and means by which performance was determined must be described in writing by either the equipment manufacturer or installer. At the request of equipment manufacturers, most release detection equipment and methods available in the United States have been evaluated by a third party, who is independent of the manufacturer or vendor of the release detection system. The evaluation shows that a release detection system can work as designed. Evaluations follow recommended evaluation procedures and testing and often take place at a testing facility. EPA and third parties developed evaluation procedures for all release detection methods.

You may use any technology, as long as it meets a performance standard of detecting a leak of 0.2 gallons per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Implementing agencies can approve another method if you demonstrate that it works as well as one of the methods listed in this booklet and you comply with any condition the agency imposes.

Although not mandated by federal UST requirements, many implementing agencies prefer, and some require, third party evaluation of release detection equipment and methods. Check with your implementing agency to determine what is acceptable. Although an evaluation and its resulting documentation are technical, you should be familiar with the evaluation's report and its results form. You may obtain this documentation from the release detection manufacturer and should keep it on file. Whether by the manufacturer, installer, or third party evaluation, performance claims determinations contain a signed certification that the system performed as described, as well as documentation of proper monitoring or testing procedures and any limitations of the system. This information is important to your compliance with UST requirements. For example, if a tank tightness test was evaluated and you have documentation only for tests taking two hours or more, then your UST must be tested for at least two hours or it would fail to meet the release detection requirements.

Perform release detection according to documented procedures.

The National Work Group on Leak Detection Evaluations (NWGLDE) – an independent group – maintains a list of release detection equipment whose third-party-conducted documentation has been reviewed by the group. The list contains a detailed summary of specifications for over 390 release detection systems. Although you can use the list to help select systems and determine their compliance or acceptability, it does not consist of approved release detection systems. Approval or acceptance of release detection systems rests with your implementing agency, which in most cases is your state environmental agency. See NWGLDE's list at www.nwglde.org.

Required Probabilities For Certain Release Detection Methods

The federal UST regulation requires that release detection methods be able to detect certain leak rates consistently. Methods must detect the specified leak rate with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. This means that, of 100 tests of USTs leaking at the

specified rate, at least 95 of them must be correctly detected. It also means that, of 100 tests of non-leaking USTs, no more than 5 can be incorrectly called leaking.

Not all release detection methods must meet required probabilities. The requirement applies to all tank release detection methods except for secondary containment with interstitial monitoring and groundwater and vapor monitoring. It also applies to automatic line leak detectors and line tightness testing.

Keep Release Detection Records

For each release detection method you use, you must keep these written records:

- Proof that performance claims are met and the means by which performance was determined by either the equipment manufacturer or installer and probabilities of detection and false alarm are met. Retain these records for five years or another period determined by your implementing agency.
- Results of any sampling, testing, or monitoring. Retain these results for one year or another period determined by the implementing agency. Retain tank tightness test results until the next test is conducted.
- All calibration, maintenance, and repair of release detection equipment permanently located on-site. Retain records for one year after servicing work is completed or another period determined by your implementing agency.
- Schedules of required calibration and maintenance provided by equipment manufacturers. Retain the schedules for five years from the date of installation.
- UPDATED **Other records may be required and are discussed, as applicable, for individual release detection methods.**

Keep Records Demonstrating Compatibility

UPDATED **The 2015 UST regulation includes additional requirements to help owners and operators demonstrate that each UST system is compatible with certain regulated substances before storing them. If you store regulated substances containing greater than 10 percent ethanol or greater than 20 percent biodiesel, or any other regulated substance identified by your implementing agency, you must keep records demonstrating compatibility of the UST system, including release detection equipment, for as long as the UST system stores the regulated substance. For more information on compatibility requirements, see EPA's *UST System Compatibility With Biofuels* at** www.epa.gov/ust/ust-system-compatibility-biofuels.

Make sure your UST system is compatible with the substance it stores.

Responding To Alarms And Other Suspected Releases

Alarms associated with release detection monitoring may indicate a release has occurred. An alarm incident does not necessarily have to be reported. In the event of an alarm, you must investigate,

determine, and correct the source of the alarm. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency. Check with your implementing agency to determine whether the alarm incident must also be reported.

Secondary Containment With Interstitial Monitoring

Secondary containment uses a barrier, an outer wall, or a liner around the UST or piping to provide secondary containment. Tanks can also be equipped with inner bladders that provide secondary containment.

UPDATED

Tanks and piping installed or replaced after April 11, 2016 must be secondarily contained and use interstitial monitoring. This applies to UST systems containing petroleum or hazardous substances.

Will You Be In Compliance?

When installed and operated according to the manufacturer's specifications, secondary containment with interstitial monitoring meets the federal release detection requirements for USTs. You must test for a release at least once every 30 days. Secondary containment with interstitial monitoring can also be used to detect leaks from piping. See release detection for piping requirements on page 33.

How Does The Release Detection Method Work?

Secondary containment provides a barrier between the tank and the environment. The barrier holds the leak between the tank and the barrier so that the leak is detected. The barrier is shaped so that a leak will be directed toward the interstitial monitor. Barriers include:

- Double-walled or jacketed tanks, in which an outer wall partially or completely surrounds the primary tank;
- Internally fitted liners, such as bladders; and
- Leak proof excavation liners that partially or completely surround the tank.

Clay and other earthen materials are not considered acceptable secondary barriers.

Monitors are used to check the area between the tank and the barrier for leaks and alert the operator if a leak is suspected.

Some monitors indicate the physical presence of the leaked product, either liquid or gaseous. Other monitors check for a change in condition that indicates a hole in the tank, such as a

Secondary containment with interstitial monitoring

Replaced means:

For tanks – to remove a tank and install another tank.

For piping – to remove 50 percent or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run.

loss of vacuum or pressure, or a change in the level of a monitoring liquid, such as a brine or glycol solution, between the walls of a double-walled tank.

Monitors can be as simple as a dipstick used at the lowest point of the containment to see if liquid product has leaked and pooled there. Monitors can also be sophisticated automated systems that continuously check for leaks.

What Are The Regulatory Requirements?

You must check for a release at least once every 30 days.

The barrier must be immediately around or beneath the tank.

A double-walled system must be able to detect a leak through the inner wall.

An excavation liner must:

- Direct a leak toward the monitor;
- Prohibit the specific product stored to pass through it no faster than 10^{-6} centimeters per second;
- Be compatible with the product stored in the tank;
- Allow the UST's cathodic protection to work unaffected;
- Withstand moisture;
- Always be above the groundwater and the 25-year flood plain; and
- Have clearly marked and secured monitoring wells, if they are used.

A bladder must be compatible with the product stored and must be equipped with an automatic monitoring device.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment (including dipsticks):

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect sensors for residual build-up**
- **Ensure sensor communication with controller**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's requirements; a nationally recognized code of practice; or requirements determined by your implementing

agency to be as protective of human health and the environment.

An unexplained presence of liquid in the interstitial space of secondarily contained systems is considered an unusual operating condition. Except if the liquid in the interstitial space is used as part of the interstitial monitoring method, for example brine, if you find liquid in the interstitial space of secondarily contained systems, you must investigate, remove the liquid, and correct the source of the liquid.

You must investigate and remove any liquid in the interstitial space of secondarily contained systems, unless the liquid is part of the release detection method.

Anything Else You Should Consider?

In areas with high groundwater or a lot of rainfall, it may be necessary to select a secondary containment system that completely surrounds the tank to prevent moisture from interfering with the monitor.

This method works effectively only if the barrier and the interstitial monitor are installed correctly. Therefore, trained and experienced installers are necessary.

Automatic Tank Gauging Systems

UPDATED

In an automatic tank gauging (ATG) system, a probe permanently installed in the tank is connected to a monitor to provide information on product level and temperature. These systems calculate changes in product volume that can indicate a leaking tank. ATG systems operate in one of two modes: inventory mode and leak detection mode. In the leak detection mode, ATG systems can be set to perform a leak test on either a periodic basis or continuous basis. Leak tests set to run on a periodic basis are referred to as in-tank static tests and require the system to be taken off-line typically for between one to six hours. Leak testing set to run on a continuous basis is referred to as continuous in-tank leak detection and operates on an uninterrupted or nearly uninterrupted manner.

Will You Be In Compliance?

When installed and operated according to the manufacturer's specifications, ATG systems meet the federal release detection requirements for tanks installed on or before April 11, 2016. A leak test performed at least every 30 days is required for the tank. This method does not detect piping leaks. For piping, see release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

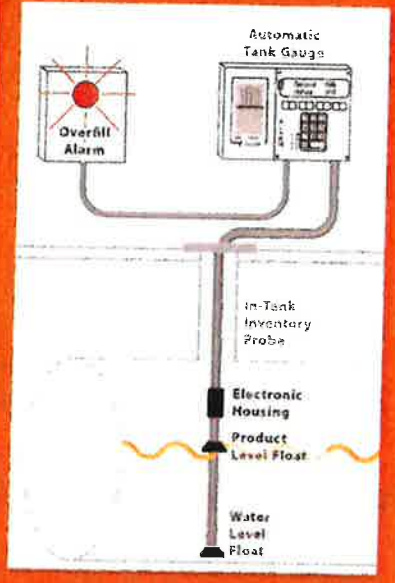
In the inventory mode:

- The product level and temperature in a tank are measured and recorded by a computer.
- ATG systems replace the use of the gauge stick to measure product level and perform inventory control. This mode records the activities of an in-service tank, including deliveries.

UPDATED

In the leak detection mode for in-tank static testing:

- **The tank is taken out of service and the product level and temperature are measured for at least one hour.**



Automatic tank gauging system

In the leak detection mode, ATG systems can be set to perform either a:

- periodic leak test, also known as an in-tank static test, or
- continuous leak test, also known as continuous in-tank leak detection.

Note: When referring to ATG systems in this booklet, we mean a system performing in-tank static testing while operating in the leak detection mode. See continuous in-tank leak detection on page 13 for ATG systems performing continuous in-tank leak detection testing while operating in the leak detection mode.

In the leak detection mode for continuous in-tank leak detection:

- **Some systems, known as continuous ATG systems, do not require the tank be taken out of service to perform a test. This is because these systems can gather and analyze data during many short periods when no product is being added to or taken from the tank.**
- **Other systems combine aspects of automatic tank gauges with statistical inventory reconciliation.**

Note: Both of these methods fall under continuous in-tank leak detection because they operate on an uninterrupted basis or pause for milliseconds to gather and record data for continual analysis of the tank's leak status. See page 13 for more information about these methods.

What Are The Regulatory Requirements?

ATG systems must be able to detect a leak of at least 0.2 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Some ATG systems can also detect a leak of 0.1 gallon per hour with the probabilities listed above.

You must obtain a conclusive pass or fail result within the 30 day monitoring period. If the test report is inconclusive, you must use another method of release detection for that 30 day monitoring period. An inconclusive result means you have not performed release detection for that 30 day period.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly:

- **Verify the system configuration**
- **Test alarm operability and battery backup**
- **Inspect probes and sensors for residual build-up**
- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's requirements; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank, you

must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

UPDATED

ATG systems have been used primarily on tanks containing gasoline or diesel. If considering using an ATG system for larger tanks or products other than gasoline or diesel, discuss its applicability with the equipment manufacturer or installer. Check the method's documentation to confirm that it will meet regulatory requirements and your needs.

With the exception of some continuous ATG systems evaluated to perform on manifolded tanks, each tank at a site must be equipped with a separate probe. Check the method's documentation to determine if the ATG system can be used with manifolded tanks. For more information, see continuous in-tank leak detection requirements on page 13. The ATG system probe is connected to a console that displays product level information and the results of the monthly test. Printers can be connected to the console to record this information.

The ATG system probe is installed through an opening, which is different than the fill pipe, on the top of the tank.

ATG systems are often equipped with alarms for high and low product level and high water level.

For ATG systems used for static release detection testing, no product can be delivered to the tank or withdrawn from it for one to six hours before the monthly test or during the test, which generally takes one to six hours. These times vary depending on the specific ATG system model. Check with your equipment manufacturer or installer. You may also find information on your ATG system on NWGLDE's list of release detection evaluations at www.nwglde.org.

ATG systems can be linked with computers at remote locations, from which the system can be programmed or read.

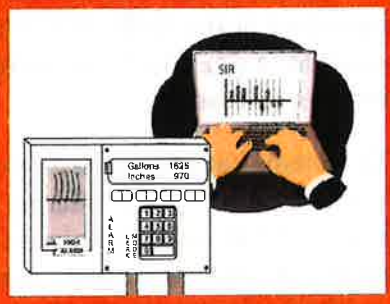
An ATG system can be programmed to perform a test more often than once every 30 days. EPA recommends this practice.

Some ATG systems may be evaluated to test at relatively low capacities, for example, 25 percent or 30 percent. Although the product level at such capacities may be valid for the test equipment, it may not appropriately test all portions of the tank that routinely contain product. The ATG leak test must be run and tank tested at the capacity to which it is routinely filled.

Continuous In-Tank Leak Detection

UPDATED

The 2015 federal UST regulation added continuous in-tank leak detection (CITLD) as a release detection method and establishes requirements for its operation and maintenance. CITLD encompasses all statistically based methods where the system incrementally gathers measurements on an uninterrupted or nearly uninterrupted basis to determine a tank's leak status.



Continuous in-tank leak detection

Will You Be In Compliance?

You can use CITLD methods for tanks installed on or before April 11, 2016. The system incrementally gathers measurements to determine a tank's leak status within the 30-day monitoring period. Some methods address pipelines and have been verified to meet pipeline performance standards. These methods are capable of meeting the pipeline release detection requirements. See release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

There are two major groups that fit into this category: continuous statistical release detection, also referred to as continuous automatic tank gauging methods, and continual reconciliation. Both groups typically use sensors permanently installed in the tank to obtain inventory measurements. They are combined with a microprocessor in the ATG system or other control console that processes the data. Continual reconciliation methods are further distinguished by their connection to dispensing meters that allow for automatic recording and use of dispensing data in analyzing tanks' leak status.

What Are The Regulatory Requirements?

CITLD operates on an uninterrupted basis or operates by allowing the system to gather incremental measurements to determine the release status of the tank at least once every 30 days.

CITLD must be able to detect a leak at least 0.2 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Some CITLD methods can also detect a leak of 0.1 gallon per hour with the probabilities listed above.

You must obtain a conclusive pass or fail result within the 30 day monitoring period. If the test report is inconclusive, you must use another method of release detection for that 30 day monitoring period. An inconclusive result means you have not performed release detection for that 30 day period.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect probes and sensors for residual build-up**
- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

See NWGLDE at www.nwglde.org, which is a source for check ing whether your CITLD method meets regulatory performance requirements.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank you must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

UPDATED

CITLD methods may allow for monitoring larger tank capacities and higher system throughputs. However, these methods have limitations as well.

Statistical Inventory Reconciliation

UPDATED

The 2015 federal UST regulation added statistical inventory reconciliation (SIR) as a release detection method. For this method, a trained professional uses sophisticated computer software to conduct a statistical analysis of inventory, delivery, and dispensing data, which is gathered periodically and supplied regularly to the vendor.

Will You Be In Compliance?

SIR, when performed according to the vendor's specifications, meets federal release detection requirements for USTs and piping installed on or before April 11, 2016. SIR with a 0.2 gallon per hour release detection capability meets the federal requirements for monthly monitoring for tanks. SIR with a 0.1 gallon per hour release detection capability meets the federal requirements as an equivalent to tank tightness testing. If it has the capability of detecting even smaller leaks, SIR meets the federal requirements for line tightness testing as well. See release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

SIR analyzes inventory, delivery, and dispensing data collected over a period of time to determine whether or not a tank or piping is leaking a regulated substance.

Each operating day, the product level is measured using a gauge stick or other tank level monitor. You must also keep complete records of all withdrawals from the UST and all deliveries to the UST. After data have been collected for the period of time required by the SIR vendor, you provide the data to the SIR vendor.

The SIR vendor conducts a statistical analysis of the data to determine whether or not your UST system is leaking. The SIR vendor provides you with a test report of the analysis. Alternatively, you can purchase SIR software, which performs this same analysis and provides a test report from your own computer.

Some methods combine aspects of automatic tank gauges with statistical inventory reconciliation. In these methods,

You must obtain a conclusive pass or fail result within the 30-day monitoring period. If the test report is inconclusive, you must use another method of release detection for that 30-day monitoring period. An inconclusive result means you have not performed release detection for that 30-day period.

sometimes called hybrid methods, a gauge provides liquid level and temperature data to a computer running SIR software, which performs the analysis to detect leaks.

SIR methods are distinguished from continuous in-tank leak detection methods by how inventory, delivery, and dispensing data are processed; they provide a determination of the release status of the tank or piping. SIR data is processed on a periodic basis involving a separate analysis that is performed either by a SIR vendor or SIR software. Continuous statistically based in-tank release detection methods process data on an on-going, uninterrupted or nearly uninterrupted manner.

EPA's Introduction To Statistical Inventory Reconciliation For Underground Storage Tanks at www.epa.gov/ust/introduction-statistical-inventory-reconciliation-underground-storage-tanks explains how to do statistical inventory reconciliation.

What Are The Regulatory Requirements?

SIR methods must report a quantitative result with a calculated leak rate, be able to detect a leak at least 0.2 gallons per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent. Some SIR methods can also detect a leak of 0.1 gallons per hour with the probabilities listed above.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly:

For hand held non-electronic equipment, such as tank gauge sticks:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect probes and sensors for residual build-up**
- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

UPDATED

The SIR method must use a threshold that does not exceed one-half the minimum detectable leak rate (MDL). Pd is the probability of detection and Pfa is the probability of false alarm in a normal probability distribution. SIR data is typically analyzed through the calculation of the reportable

values of MDL and the leak declaration threshold T are related as follows:

- **MDL is always greater than T**
- **Pd = (1 – Pfa), then MDL = 2 times T (that is, the threshold is equal to ½ MDL)**

Any analysis of data indicating a threshold value greater than one-half MDL should be appropriately investigated as a suspected release.

You must keep on file for one year the test reports. You must also keep on file for five years documentation that the SIR method used for your system is capable of detecting a leak rate of 0.2 gallons per hour with a probability of detection of 95 percent and probability of false alarm.

Documentation on the method's capability of meeting performance requirements must reflect the way the method is used in the field.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank you must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

UPDATED

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

If you are considering using a SIR method, check the method's documentation to confirm that it will meet regulatory requirements and your specific UST system needs.

A SIR method's ability to detect releases declines as throughput increases. If you are considering using a SIR method for high throughput UST systems, check the method's documentation to confirm that it will meet regulatory requirements and your needs.

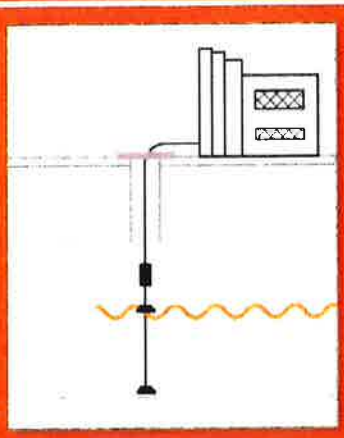
Data, including product level measurements, dispensing data, and delivery data, should all be carefully collected according to the SIR vendor's specifications. Poor data collection can produce inconclusive results and noncompliance.

The SIR vendor will generally provide forms for recording data, a calibrated chart converting liquid level to volume, and detailed instructions on conducting measurements.

SIR should not be confused with other release detection methods that also rely on periodic reconciliation of inventory, withdrawal, and delivery data. Unlike manual tank gauging or inventory control, SIR uses a sophisticated statistical analysis of data to detect releases.

Tank Tightness Testing With Inventory Control

This method combines periodic tank tightness testing with monthly inventory control. Inventory control involves taking measurements of tank contents and recording amount received and pumped each operating day, as well as reconciling all this data at least once every 30 days. Every five years, this combined method must also include a tightness test, which is a sophisticated test performed by a trained professional.



Tank tightness testing

Will You Be In Compliance?

When performed according to the manufacturer's specifications, periodic tank tightness testing combined with monthly inventory control can temporarily meet the federal release detection requirements for tanks installed on or before April 11, 2016. This method does not detect piping leaks. This combined method can be used only for 10 years after the tank was installed.

These two release detection methods must be used together because inventory control alone does not meet the federal requirements for monthly release detection for tanks. Line tightness testing, a separate type of tightness testing, is also an option for underground piping; see release detection requirements for piping on page 33.

We discuss both tank tightness testing and inventory control below. We discuss tank tightness testing first, followed by inventory control. Tank tightness testing is also used in combination with manual tank gauging as described on page 24. In addition, tank tightness testing may be used to investigate a suspected release.

Tank Tightness Testing

How Does The Release Detection Method Work?

Tightness tests, also referred to as precision tank tests, include a variety of methods. These methods are divided into two categories: volumetric and nonvolumetric.

Volumetric test methods generally involve precisely measuring in milliliters or thousandths of an inch the change in product level in a tank over time. Additional characteristics of this category of tank tightness testing include:

- Changes in product temperature also must be precisely measured in thousandths of a degree at the same time as level measurements, because temperature changes cause volume changes that interfere with finding a leak.
- The product in the tank must be at a certain minimum level before testing. This often requires adding product from another tank on site or purchasing additional product.
- A net decrease in product volume, which you find by subtracting out volume changes caused by temperature, over the time of the test indicates a leak.
- A few of these methods measure properties of product that are independent of temperature, such as mass, and so do not need to measure product temperature.

There are many nonvolumetric test methods. These methods can be distinguished by what they test or which areas of the UST system they test. The methods:

- Involve acoustics that interpret an ultrasonic signal.
- Use vacuum or pressure decay with gain or loss of pressure, respectively, to determine whether there is a hole in the tank.
- Test either the wetted portion of the tank, which contains product, or the ullage, which is the unfilled portion of the tank.
- Involve tracer compounds circulated through the UST system, which test strategically placed sampling ports outside the UST system.

Although not typically done, you may use tank tightness testing to meet the monthly release detection requirement. This test must meet performance standards of 0.1 gallon per hour leak rate with probability of detection at least 95 percent and probability of false alarm not to exceed 5 percent.

Except for tracer compounds used for both volumetric and nonvolumetric test methods, the following generally apply:

- The testing equipment is temporarily installed in the tank, usually through the fill pipe.
- The tank must be taken out of service for the test.
- Some tightness test methods require the tester measure and calculate by hand. Other tightness test methods are highly

automated. After the tester sets up the equipment, a computer controls the measurements and analysis.

- Some ATG systems are capable of meeting the regulatory requirements for tank tightness testing and may be considered an equivalent method. Check with your implementing agency.

What Are The Regulatory Requirements?

The tightness test method must be able to detect a leak at least 0.1 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent.

UPDATED

No later than October 13, 2018, you must begin testing your release detection equipment annually to make sure it is working properly.

Tank tightness testing is typically performed by a qualified testing company. Qualified testing companies periodically calibrate and maintain their equipment according to applicable standards. If your implementing agency allows use of ATG systems or other system controllers for tank tightness testing, you must follow the testing procedures required for ATG systems. **See page 10.**

You must perform a tightness test at least every 5 years. You may use this combination method temporarily for up to 10 years after the UST was installed. After 10 years, you must use a different release detection method.

Under the federal UST regulation, this combination method can only be used for 10 years after the tank was installed. However, most states have secondary containment with interstitial monitoring requirements. Therefore, you may not be able to use this combination method. Check with your implementing agency.

Anything Else You Should Consider?

For most methods, a testing company performs the test. You should observe the test.

Depending on the method, tank tightness testing can be used on tanks of varying capacity and tanks containing gasoline and diesel. Many test methods have limitations on the capacity of the tank or the amount of ullage, which is the unwetted portion of the tank that should not be exceeded. Methods that use tracer chemical analysis do not have limitations on tank capacity. If you are considering using tightness testing for products other than gasoline or diesel, discuss the method's applicability with the manufacturer's representative. Check the method's documentation to confirm that it will meet regulatory requirements and your specific UST system needs.

Manifolded tanks generally should be isolated and tested separately.

Procedure and personnel, not equipment, are usually the most important factors in a successful tightness test. Therefore, well-

trained and experienced testers are very important. Some implementing agencies have tester certification programs.

Inventory Control

How Does The Release Detection Method Work?

Inventory control requires frequent measurements of tank contents and math calculations that let you compare your stick inventory, which is what you measured, to your book inventory, which is what your recordkeeping indicates you should have. Some people call this process inventory reconciliation. If the difference between your stick and book inventory is too large, your tank may be leaking.

EPA's Doing Inventory Control Right at www.epa.gov/ust/doing-inventory-control-right-underground-storage-tanks explains how to do inventory control. The booklet also contains standard recordkeeping forms.

UST inventories are determined each operating day by using a gauge stick and recording the data on a form. The level on the gauge stick is converted to a volume of product in the tank using a calibration chart, which is often furnished by the UST manufacturer.

The amounts of product delivered to and withdrawn from the UST each operating day are also recorded. At least once every 30 days, the gauge stick data and the sales and delivery data are reconciled and the month's overage or shortage is determined. If the overage or shortage is greater than or equal to 1 percent of the tank's flow-through volume plus 130 gallons of product, the UST may be leaking.

What Are The Regulatory Requirements?

Inventory control must be used in combination with tank tightness testing performed at least every 5 years to meet the monthly release detection requirement. This combination method can only be used for up to 10 years after the tank was installed. This method may not be used for UST systems installed after April 11, 2016.

You may need to get a corrected tank chart if your tank is not level.

The gauge stick must reach the bottom of the tank and be marked so that the product level can be determined to the nearest one-eighth of an inch. A monthly measurement must be taken to identify any water in the tank.

Product dispensers must be calibrated to the applicable weights and measures standards.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment, such as tank gauge sticks:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank you must investigate and correct the source of the water. Suspected releases must be reported to your implementing agency within 24 hours or another period specified by your implementing agency.

Anything Else You Should Consider?

UPDATED

Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

The accuracy of tank gauging can be increased by spreading product finding paste on the gauge stick before taking measurements or by using in tank product level monitoring devices.

Inventory control is a practical, commonly used management practice that does not require closing down the tank operation for long periods.

Manual Tank Gauging

Manual tank gauging requires keeping the tank undisturbed for at least 36-58 hours each week, during which the contents of the tank are measured twice at the beginning and twice at the end of the test period. At the end of each week, you compare the results to the standards shown on page 25 to see if your tank is leaking.

Will You Be In Compliance?

Manual tank gauging can be used only on tanks containing 2,000 gallons or less. Tanks containing 1,000 gallons or less can use this method alone, if they meet specified diameter requirements discussed below. Tanks from 1,001 to 2,000 gallons, and tanks between 551 and 1,000 gallons that do not meet the specified diameters, can temporarily use manual tank gauging when it is combined with tank tightness testing. Under the federal UST regulation, this combined method can be used only for 10 years after the tank was installed. This method may not be used for UST systems installed after April 11, 2016.

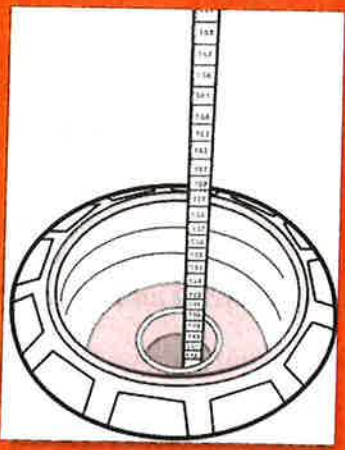
Manual tank gauging detects leaks only from tanks; this method does not detect piping leaks. For requirements for piping, see release detection requirements for piping on page 33.

How Does The Release Detection Method Work?

You must take four measurements of the tank's contents, two at the beginning and two at the end of a 36-58 hour period, during which nothing is added to or removed from the tank. See the table on page 25.

The average of the two consecutive ending measurements are subtracted from the average of the two beginning measurements to indicate the change in product volume.

Every week, you compare the calculated change in tank volume to the standards shown in the table on page 25. If the calculated change exceeds the weekly standard, the UST may be leaking. Also, you must compare the averages of the four weekly test results to the monthly standard in the same way. See the table below.



Manual tank gauging

EPA's *Manual Tank Gauging For Small Underground Storage Tanks* at www.epa.gov/ust/manual-tank-gauging-small-underground-storage-tanks explains how to do manual tank gauging correctly and contains standard recordkeeping forms.

What Are The Regulatory Requirements?

You must take liquid level measurements with a gauge stick that is marked to measure the liquid to the nearest one-eighth of an inch.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment, such as tank gauge sticks:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

You must perform these activities according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

Under the federal UST regulation, you may only use this combination method for 10 years after the tank was installed. However, most states have secondary containment with interstitial monitoring requirements. Therefore, you may not be able to use this combination method. Check with your UST implementing agency.

Manual tank gauging may be used as the sole method of release detection for tanks with a capacity of 550 gallons or less and capacities between 551 and 1,000 gallons with a 48 inch or 64 inch diameter. All other tanks using manual tank gauging must combine the method with tank tightness testing. **These tanks may use the combined method for up to 10 years after installation. After 10 years, you must use another release detection method.** See the other sections of this booklet for allowable monthly monitoring methods.

Table Of Test Standards For Manual Tank Gauging

Tank Size	Minimum Duration Of Test	Weekly Standard (1 test)	Monthly Standard (4-test average)
Up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when tank diameter is 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (when tank diameter is 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (also requires periodic tank tightness testing)	36 hours	13 gallons	7 gallons
1,001-2,000 gallons (also requires periodic tank tightness testing)	36 hours	26 gallons	13 gallons

An unexplained presence of water in the tank is considered an unusual operating condition. If you find water in your tank, you

must investigate and correct the source of the water. You must report suspected releases to your implementing agency within 24 hours or the period specified by your implementing agency.

Anything Else You Should Consider?

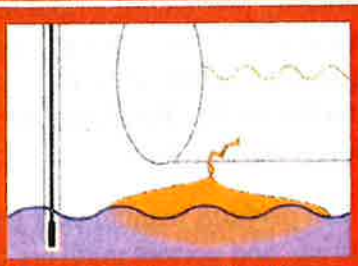
Detecting water in the tank is important. Water around a tank may mask a hole in the tank or distort the data to be analyzed by temporarily preventing a release. To detect a release in this situation, check for water at least once a month. **Depending on the product in the tank, detecting water may be difficult, but it is possible to do. Products such as ethanol-based fuels may not form a water bottom.**

UPDATED

You can perform manual tank gauging yourself. Correct gauging, recording, and correct math are the most important factors for successful tank gauging. The accuracy of manual tank gauging can be increased by spreading product-finding paste on the gauge stick before taking measurements.

Groundwater Monitoring

Groundwater monitoring detects the presence of liquid product floating on the groundwater near the tank and along the piping runs. To discover if released product has reached groundwater, these wells can be checked periodically using hand-held equipment or continuously with permanently installed equipment.



Groundwater monitoring

Will You Be In Compliance?

When installed and operated according to the manufacturer's instructions, a groundwater monitoring system can meet the federal release detection requirements for USTs and piping installed on or before April 11, 2016. Monitoring of a groundwater monitoring system is required at least once every 30 days for the tank.

UPDATED

No later than October 13, 2018, if you use groundwater monitoring, you must begin keeping records of a site assessment, for as long as you use this method, showing that the monitoring system is installed properly. Site assessments performed after October 13, 2015 must be signed by a licensed professional.

How Does The Release Detection Method Work?

Groundwater monitoring involves the use of permanent monitoring wells placed close to the UST, with the wells extending below the groundwater level. The wells are checked at least every 30 days for the presence of product that has leaked from the UST and is floating on the groundwater.

The two main components of a groundwater monitoring system are the monitoring wells, which are typically at least 4 inches in diameter, and the monitoring device.

Electronic detection devices may be permanently installed in the well for automatic, continuous measurements for released product.

Manual devices range from a bailer, which collects a liquid sample for visual inspection, to a device that can be inserted into the well to electronically indicate the presence of leaked

product. Manual devices must be used to check each monitoring well at least once every 30 days.

Before installation, a site assessment is necessary to determine the soil type, groundwater depth and flow direction, and the general geology of the site. A trained professional must perform this assessment.

The number of wells and their placement is very important. Only an experienced contractor can properly design and construct an effective monitoring well system. A minimum of two wells is recommended for a single tank excavation. Three or more wells are recommended for an excavation with two or more tanks. Some implementing agencies have developed rules for monitoring well placement.

No later than October 13, 2018, if you use vapor monitoring or groundwater monitoring, you must begin keeping records of a site assessment, for as long as you use these methods, showing that the monitoring system is set up properly. If you do not have a site assessment for your vapor monitoring or groundwater monitoring, you will need to have one conducted. Site assessments conducted after October 13, 2015 must be signed by a licensed professional.

What Are The Regulatory Requirements?

Groundwater monitoring can only be used if the stored substance does not mix with water and floats on top of water.

If groundwater monitoring is used as the sole method of release detection, the groundwater must be less than 20 feet below the surface, and the soil between the well and the UST must be sand, gravel, or other coarse materials.

Groundwater at times may be more than 20 feet from the ground surface, due to seasonal water table variations. This can result in the depth to groundwater requirement not being met.

Product detection devices must be able to detect one-eighth inch or less of leaked product on top of the groundwater.

Monitoring wells must be properly designed and sealed to keep them from becoming contaminated from outside sources.

Wells should be placed in the UST backfill so they can detect a leak as quickly as possible.

Monitoring wells must be secured and clearly marked.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment, such as groundwater bailers:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect well probes and sensors for residual build-up**

- **Ensure floats move freely, the shaft is not damaged, and cables are free of kinks and breaks**
- **Test manual electronic devices, such as portable probes**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's requirements; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

Anything Else You Should Consider?

In general, groundwater monitoring works best at UST sites where:

- Monitoring wells are installed in the tank backfill; and
- There are no previous releases of product that would falsely indicate a current release.

A professionally conducted site assessment is critical for determining these site-specific conditions.

UPDATED

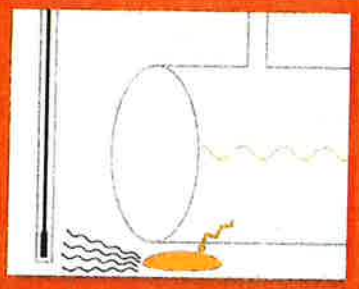
Some states may allow you to use groundwater monitoring wells to perform vapor monitoring. Check with your implementing agency to determine what is acceptable. If allowed, unless an analysis is performed and valid documentation regarding use of the wells for vapor monitoring during low water table conditions is identified in the site assessment, the wells will be restricted for groundwater monitoring only.

UPDATED

In the event of a confirmed release at an UST site, groundwater monitoring is no longer acceptable to meet the release detection requirement unless the site is remediated and a new site assessment is conducted.

Vapor Monitoring

Vapor monitoring measures either product vapors in the soil around the UST, referred to as passive monitoring, or special tracer chemicals added to the UST, referred to as active monitoring.



Vapor monitoring

Will You Be In Compliance?

When installed and operated according to the manufacturer's instructions, vapor monitoring can meet the federal release detection requirements for tanks and piping installed on or before April 11, 2016. Monitoring of a vapor monitoring system at least every 30 days is required for the tank.

UPDATED

No later than October 13, 2018, if you use vapor monitoring you must begin keeping records of a site assessment, for as long as you use this method, showing that the monitoring system is installed properly. Site assessments performed after October 13, 2015 must be signed by a licensed professional.

How Does The Release Detection Method Work?

Vapor monitoring can be categorized into two types: active monitoring and passive monitoring. Active monitoring is also referred to as chemical marker monitoring or as tracer compound analysis.

Passive monitoring detects or measures vapors from released product within monitoring wells placed in the soil around the tank to determine if the tank is releasing regulated substances.

Active monitoring samples for the presence of a tracer compound outside the UST system that was introduced in the tank or underground piping.

Fully automated vapor monitoring systems have permanently installed equipment to continuously or periodically gather and analyze vapor samples and activate a visual or audible alarm when a release is detected, independent of actions by an UST system operator.

Active monitoring requires the installation of monitoring wells or sampling points strategically placed in the tank

backfill or along pipe runs to intercept special chemicals that, in the event of a release, are detected in the sampling points.

Manually operated vapor monitoring systems range from equipment that immediately analyzes a gathered vapor sample to devices that gather a sample, which must be sent to a laboratory for analysis. Manual systems must be used at least once every 30 days to monitor a site. If active monitoring is performed, it must be done at least every 30 days by qualified technicians.

To ensure they are properly operating, vapor monitoring devices must be periodically calibrated according to the manufacturer's instructions.

Before installation of any vapor monitoring system for release detection, a site assessment is necessary to determine the soil type, groundwater depth and flow direction, and the general geology of the site. Only a trained professional can do this.

No later than October 13, 2018, if you use vapor monitoring or groundwater monitoring, you must keep records of a site assessment, for as long as you use these methods, showing that the monitoring system is set up properly. If you do not have a site assessment for your vapor monitoring or groundwater monitoring, you will need to have one conducted. Site assessments conducted after October 13, 2015 must be signed by a licensed professional.

The number of wells and their placement is very important. Only an experienced contractor can properly design and construct an effective monitoring well system. Vapor monitoring requires installation of monitoring wells within the tank backfill. A minimum of two wells is recommended for a single tank excavation. Three or more wells are recommended for an excavation with two or more tanks. Some implementing agencies have developed requirements for monitoring well placement.

What Are The Regulatory Requirements?

The UST backfill must be sand, gravel, or another material that will allow petroleum vapors or tracer compound to easily move to the monitor.

The backfill must be clean enough that previous contamination does not interfere with detecting a current release.

The substance stored in the UST must vaporize easily so that the vapor monitor can detect a release. For example, some vapor monitoring systems do not work well, if at all, with diesel fuel.

High groundwater, excessive rain, or other sources of moisture must not interfere with operation of vapor monitoring for more than 30 consecutive days.

Monitoring wells must be secured and clearly marked.

UPDATED

No later than October 13, 2018, you must begin performing the following on your release detection equipment annually to make sure it is working properly.

For hand held non-electronic equipment:

- **Check for operability and serviceability**
- **Keep walkthrough inspection records for one year**

For other equipment:

- **Verify the system configuration of the controller**
- **Test alarm operability and battery backup**
- **Inspect sensors for residual build-up**
- **Test manual electronic devices, such as photoionization detectors**
- **Keep records of these tests for three years**

These activities must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

Anything Else You Should Consider?

Before installing a vapor monitoring system, a site assessment must be done to determine whether vapor monitoring is appropriate at the site. A site assessment usually includes at least a determination of the groundwater level, background contamination, stored product type, and soil type. This assessment can only be done by a trained professional.

UPDATED

In the event of a confirmed release at an UST site, vapor monitoring is no longer acceptable to meet the release detection requirement unless the site is remediated and a new site assessment is conducted.

Release Detection For Underground Piping

Owners and operators of federally regulated UST systems must have a release detection method, or combination of methods for connected underground piping that routinely contains product.

Will You Be In Compliance?

When installed and operated according to the manufacturer's specifications, the release detection methods discussed here meet the federal regulatory requirements for underground piping systems. Your UST may have suction or pressurized piping, which are discussed below.

UPDATED

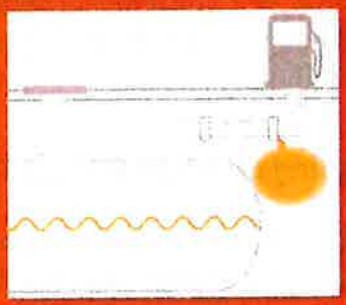
Piping installed or replaced after April 11, 2016 must have secondary containment with interstitial monitoring, except for suction piping that meets requirements discussed below. In addition, pressurized piping must have an automatic line leak detector.

What Are The Regulatory Requirements For Suction Piping?

No release detection is required if the suction piping system has these characteristics: below-grade piping that operates under atmospheric pressure; enough slope so that the product in the pipe can drain back into the tank when suction is released; and only one check valve, which is located as close as possible beneath the pump in the dispensing unit. If a suction line is to be considered exempt based on these characteristics, there must be some way to verify that the line actually has these characteristics.

Suction piping installed on or before April 11, 2016 that does not have all of the characteristics noted above must use one of the following release detection methods:

- A line tightness test at least every three years
- Monthly interstitial monitoring
- Monthly vapor monitoring
- Monthly groundwater monitoring
- Monthly statistical inventory reconciliation



Line leak detection

- Continuous in-tank leak detection only for methods that include pipelines
- Other monthly monitoring that meets performance standards or approved by your implementing agency

Suction lines are not pressurized very much during a tightness test of 7 to 15 pounds per square inch.

Interstitial monitoring, vapor monitoring, groundwater monitoring, continuous in-tank leak detection, and statistical inventory reconciliation have the same regulatory requirements for piping as they do for tanks. See earlier sections of this booklet for information on those methods.

UPDATED **Suction piping installed or replaced after April 11, 2016 that does not meet all of the design standards above must have secondary containment with interstitial monitoring.**

What Are The Regulatory Requirements For Pressurized Piping?

Pressurized piping installed on or before April 11, 2016 must have an automatic line leak detector (ALLD) that:

- Shuts off flow, or
- Restricts flow, or
- Triggers an audible or visual alarm

The ALLD must be designed to detect a release at least 3 gallons per hour at a line pressure of 10 pounds per square inch within 1 hour, with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent.

You must also use one of these other methods:

- Annual line tightness test
- Monthly interstitial monitoring
- Monthly vapor monitoring
- Monthly groundwater monitoring
- Monthly statistical inventory reconciliation
- UPDATED **Continuous in-tank leak detection, only for methods that include pipelines**
- Other monthly monitoring that meets performance standards or approved by your implementing agency

The line tightness test must be able to detect a leak at least 0.1 gallon per hour with a probability of detection of at least 95 percent and a probability of false alarm of no more than 5 percent when the line pressure is 1.5 times its normal operating pressure. The test must be conducted each year. If the test is performed at

pressures lower than 1.5 times operating pressure, the leak rate to be detected must be correspondingly lower.

Interstitial monitoring, vapor monitoring, groundwater monitoring, continuous in-tank leak detection only for methods that include piping, and statistical inventory reconciliation have the same regulatory requirements for piping as for tanks. See earlier sections of this booklet for information on those methods.

UPDATED **Pressurized piping installed or replaced after April 11, 2016 must have secondary containment with interstitial monitoring.**

UPDATED **No later than October 13, 2018, you must begin annual operability testing of ALLDs to determine they are capable of detecting a leak of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour by simulating a leak at or below this leak rate. You must keep records of these tests for 3 years.**

The test must be performed according to manufacturer's instructions; a nationally recognized code of practice; or requirements determined by your implementing agency to be as protective of human health and the environment.

If your implementing agency allows an ALLD to meet other aspects of the pressurized piping dual release detection requirement (that is, monthly monitoring or line tightness testing), the annual operability test must be conducted to ensure the applicable performance standard can be met. Simulating a leak at 0.2 gph for monthly monitoring or 0.1 gph for line tightness testing is one way to ensure this.

How Do The Release Detection Methods Work?

ALLDs

Flow restrictors and flow shutoffs can monitor the pressure within the line in a variety of ways: whether the pressure decreases over time; how long it takes for a line to reach operating pressure; and combinations of increases and decreases in pressure.

All mechanical and electronic ALLDs must meet the annual testing requirement.

If a suspected release is detected, a flow restrictor keeps the product flow through the line well below the usual flow rate. If a suspected release is detected, a flow shutoff completely cuts off product flow in the line or shuts down the pump.

Both automatic flow restrictors and shutoffs are permanently installed directly into the pipe or the pump housing.

A continuous alarm system constantly monitors line conditions and immediately triggers an audible or visual alarm if a release is suspected. An automated interstitial monitoring system can be set to operate continuously independent of an operator and sound an alarm, flash a signal on the console, or even ring a telephone in a manager's office when a release is suspected.

A self diagnostic system does not meet the annual testing requirement, unless the system performs a simulated leak test.

UPDATED **An automated interstitial monitoring system can be combined with an automatic shutoff system so that whenever the system detects a suspected release, the product flow in the piping is completely shut down. Under other methods in 40 CFR §**

280.43(i)(2), EPA recognizes such a setup would meet the monthly monitoring requirement as well as the automatic line leak detector requirement. The following conditions must be met:

- **Sump sensors used for piping interstitial monitoring must remain as close as practicable to the bottom of interstitial spaces being monitored.**
- **Monthly monitoring records must be maintained for at least one year.**
- **Electronic and mechanical components of the system, including shutoff devices, sensors, pressure or vacuum monitors, must be tested annually for proper operation. Records of the test must be maintained for three years.**
- **Containment sumps that are part of the piping interstitial monitoring system must be tested at least once every three years for liquid tightness. Keep the results for at least three years.**

Line Tightness Testing

During a line tightness test, the line is taken out of service and usually pressurized above the normal operating pressure. A drop in pressure over time, usually an hour or more, suggests a possible leak. Suction lines are not pressurized very much during a tightness test of 7 to 15 pounds per square inch.

Most line tightness tests are performed by a testing company. You should observe the test. Some tank tightness test methods can be performed to include a tightness test of the connected piping. For most line tightness tests, no permanent equipment is installed.

In the event of trapped vapor pockets, it may be impossible to conduct a valid line tightness test. There is no way to tell definitely before the test begins if this will be a problem, but long complicated piping runs with many risers and dead ends are more likely to have vapor pockets.

Some permanently installed electronic systems, which often include electronic line leak detectors connected to an ATG system, may meet the requirements of monthly monitoring or a line tightness test.

Check with your implementing agency to determine what is allowed.

Links For More Information

Government Links

- U.S. Environmental Protection Agency's Office of Underground Storage Tanks: www.epa.gov/ust. EPA's UST compliance assistance: www.epa.gov/ust/resources-ust-owners-and-operators
- State UST program contact information: www.epa.gov/ust/underground-storage-tank-ust-contacts#states
- Tanks Subcommittee of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO): www.astswmo.org
- New England Interstate Water Pollution Control Commission (NEIWPCC): www.neiwpcc.org

Industry Codes And Standards

www.epa.gov/ust/underground-storage-tanks-usts-laws-regulations#code

Other Organizations To Contact For UST Information

http://nwglde.org/

United States Environmental Protection Agency
5401R
Washington, DC 20460

EPA 510-K-16-003
May 2016

§ 245-11 **Business Zone B.**

In the B Zone, the following uses shall be permitted:

A. Permitted principal uses are the same as in § **245-10A** ("Business Zone A"). In addition the following are Permitted Uses:

(1) Health and Fitness Facility
(2) Educational Play Center
(3) Indoor Commercial Recreation Use
(4) Instructional Schools and Studios
(5) Pet Care and Grooming facilities
(6) Satellite Dry Cleaning establishments. (note: add definition)

B. Permitted accessory uses. Same as § **245-10B**.

C. Conditional uses.

(1) Sexually oriented establishments in accordance with the following standards:

(a) The establishment shall be located at least 500 feet from the boundary of any residential zone within the Borough of Mountain Lakes and from any existing and/or approved but not yet existing house of worship, day-care center and school.

(b) In order to avoid a concentration of sexually oriented establishments, such establishment shall be located at least 1,000 feet from any other existing and/or approved but not yet existing sexually oriented establishment.

(c) The foregoing distance limitations shall be measured by a straight line drawn from the nearest point of the lot boundary on which the proposed use is to be located to the nearest point of the lot or district boundary, as the case may be, of the other use or district, and those uses, district boundary lines and dimensions shall be indicated on the submitted site plan.

(d) The building housing the sexually oriented establishment shall have a minimum front setback of 75 feet and a minimum side or rear setback of 25 feet. The building and associated parking area shall be surrounded by a perimeter landscape buffer of at least 20 feet in width, consisting of landscape plantings designed and installed to the satisfaction of the Planning Board.

(e) Every sexually oriented establishment shall be located in a single-occupant, freestanding building.

(f) No sexually oriented establishment shall be permitted in a building having a capacity to accommodate 50 or more occupants.

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(g) Off-street parking requirements for a sexually oriented establishment are one space for every 200 square feet of gross floor area or portion thereof, plus one space for each employee, provided that a minimum of 10 parking spaces shall be provided.
(h) All other requirements of the Land Use Ordinance, including but not limited to the business zone requirements, shall be met.

(2) Hotels in accordance with the following standards:
(a) The minimum lot size shall be three acres.
(b) The maximum building height shall be three (3) stories/48 feet.
(c) The minimum lot frontage along Route 46 shall be 300 feet.
(d) Ancillary facilities/amenities, including a restaurant/lounge, meeting facilities and ballroom space(s), shall be permitted.
(e) Architectural standards- The design of the facility shall be required to provide architectural facades by incorporating set-backs, a mix of natural finish materials and/or sloped roof lines and dormers.

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(3) Automobile service stations. Automobile service stations shall be subject to the following regulations:
(a) No hammering, welding or painting repair work on cars shall be done, or other work of the type usually conducted by and at automobile body shops in repairing damaged motor vehicles.
(b) A gasoline service station may also include a retail business.
(c) Parking shall be provided at 1 stall/100 square feet of Gross Floor Area for employees and customers.
(d) No outdoor or open display of merchandise or wares shall be permitted
(e) All pumps, island and canopies serving to protect customers while fueling shall be located a minimum of 40 feet from any lot or street line. Canopies, pumps and islands shall be considered accessory structures and not a second principal structure.
(f) All lifts, greasing racks and other similar equipment shall be within the building. The underground storage of petroleum products shall meet federal and state codes, as applicable, to protect the Borough's groundwater resources.
(g) The minimum frontage requirement shall be 300 feet.

(h) Motor vehicles may be parked upon the lot but only insofar as reasonably incident and accessory to the operation of an automobile service station and only in such manner and location which neither interferes with ingress and egress to the premises nor creates any hazardous condition. No storage of motor vehicles, and no unsightly accumulation of vehicles or parts thereof, shall be permitted.

(i) No banners, pennants, moving or fixed display devices, or other items of an advertising nature shall be erected on the lot or affixed to the exterior of the building or any improvement on the lot, with the exception of signs authorized by § **245-17**.

(4) Restaurants with Drive through facilities

(a)

Drive-in or drive-through facilities are permitted subject to a minimum que of six (6) vehicles. The pick- up window shall be located on the side or rear of the building to limit visibility from the primary road frontage.

(b)

No driveway shall open upon a public street within 150 feet of an intersecting public street, measured from the intersection of the tangents of the adjacent curblines.

(c)

One on-site parking space shall be provided for every two seats.

(d)

No lot line or portion thereof shall be within 1,500 feet of the lot line or portion thereof of another fast-food restaurant.

(5) Self-service storage facilities.

(1)

Self-service storage facilities are permitted only within multistory structures designed to emulate multifamily or office buildings.

(2)

The only activities permitted in individual storage units shall be the rental of the unit and the pickup and deposit of goods and/or property in dead storage. Storage units shall not be used for activities such as:

(a)
Residences, offices, workshops, studios, or hobby or rehearsal areas.

(b)
Manufacturing, fabrication, or processing of goods, service or repair of vehicles, engines, appliances or other electrical equipment, or any other individual activity.

(c)
Conducting retail sales of any kind, including garage or estate sales or auctions, or to conduct any other commercial activity; provided that the operator of the self-service storage may conduct a sale or otherwise liquidate the contents of any storage unit to satisfy and settle an account of unpaid rent or other charges, through public or private sale, in a manner provided by law.

(d)
Storage of flammable, perishable or hazardous materials or the keeping of animals.

(3)
The rental of trucks, trailers or moving equipment and the installation of trailer hitches are prohibited.

(4)
Sale of boxes or packing materials is permitted but only if accessory to the self-service storage facility.

(5)
Self-service storage facilities shall not operate or allow tenant access between the hours of 12:00 midnight and 6:00 a.m.

(6)
All goods and property stored in a self-service storage facility shall be stored in an enclosed building. No outdoor storage of any kind, including but not limited to storage of boats, RVs, vehicles, trailers or similar vehicles, etc., or storage in outdoor storage pods or shipping containers is permitted.

(7)
All storage units above ground level and storage units visible from residential areas shall gain access from the interior of the building(s) or site; no unit doors, loading bays, or docks may face or be seen from any adjacent residential areas.

(8)

Electrical service to storage units shall be for lighting and climate control only. No electrical outlets are permitted inside individual storage units. Lighting fixtures and switches shall be of a secure design that will not allow tapping the fixtures for other purposes.

D. Prohibited uses. The following uses are expressly prohibited:
(1) Sexually oriented establishments except as provided for in Subsection **C** above.

§ 245-15 **Supplementary use regulations.**

A. Conformance to regulations. See § **245-2**.

B. Permit required. No building, structure or part thereof shall be erected, raised, moved, extended, enlarged, altered or demolished until a permit has been granted by the Construction Official. A construction permit shall be conditional until a foundation survey is made at the time the foundation is in place. At such time, the applicant shall submit an accurate foundation survey to the Construction Official for his review for compliance with the zoning regulations. This survey shall be sealed by a licensed surveyor and shall show the external dimensions of the foundation, the distances from its property lines and the elevation of the top of the foundation. Following his approval of the foundation survey, the Construction Official shall validate the permit for the completion of the building. A waiver of the requirement for a survey may be granted where the Construction Official is satisfied that the completed foundation meets the setback requirement.

C. Certificate of occupancy. No land or structure shall be occupied or used in whole or in part for any purpose until a certificate of occupancy shall have been issued by the Construction Official stating that the use and building therein specified, or either of them as the case may be, complies with all the provisions of these chapters. A new certificate of occupancy shall be required for a change of use of land or structure. A "change of use" shall mean a change from one specific use of land or structure as identified in this chapter to another such use. See also § **208-15**, Approval.

D. Open lot sale, storage or display. No yard or any other open area of any lot shall be used for the sale, storage or display of merchandise, wares or personal property except as provided in Subsection **E** or **F** of this section or as noted under Subsection **D(1)**, Exceptions, below. The use of tents for any sales event shall not be allowed. Storage shall include the use of tractor-trailers and closed rolloff or shipping containers but shall not include storage sheds, provided that all applicable zoning regulations are met.
(1) Exceptions.
(a) Garage sales, yard sales, house sales, estate sales and estate auctions, provided that all of the following conditions are met:

[1] Only the personal belongings and/or contents of the property owner's house are for sale.
[2] The sale event(s) do(es) not exceed a cumulative total of six days in a calendar year.
(b) Nonprofit organizations which are located in the Borough.

F. Parking of commercial vehicles. The daytime or overnight outdoor parking of any commercially licensed vehicle with a gross vehicle weight in excess of 6,000 pounds shall be prohibited in any residential zone except in the course of normal business with residents of the area.

G. Hazardous use of buildings or land.
(1) No building or land shall be used and no building or structure shall be erected, constructed, reconstructed, altered or repaired which is arranged, intended or designed for any trade, business or use that is hazardous or potentially hazardous to health or safety or which uses hazardous substances or potentially hazardous substances, or that is noxious or offensive by reason of the emission of odor, vapor, gas, dust, smoke, toxic or corrosive fumes, noise, vibration, heat, glare or flashes of light, radiation or objectionable waste, effluent or pollutants.
(2) No open area on any premises may be used for dumping, accumulating, piling or burying trash, junk or solid or liquid waste of any kind, or for storing, dismantling, demolishing or abandoning vehicles, machinery or parts thereof. Temporary storage of material for recycling shall be permitted in residential zones.
(3) The Planning Board may exempt certain minor uses of hazardous substances upon a finding that the operation of a business using the hazardous substances within the Prime Aquifer Area does not pose a risk to public health and safety and does not pose a risk to the groundwater supply.

H. Completion and restoration of existing buildings.
(1) Nothing herein contained shall require any change in the plans, construction or designated use of a building for which a construction permit has been issued, or for which plans and a construction permit application are on file and pending at the time of the passage of this chapter, provided such plans and intended use conform with the ordinance in effect at the time the application was made, and provided the construction of the building is diligently prosecuted after the permit is granted and completed within one year thereafter.

Deleted: E. Automobile service stations. Automobile service stations shall be subject to the following regulations:¶
(1) No hammering, welding or painting repair work on cars shall be done, or other work of the type usually conducted by and at automobile body shops in repairing damaged motor vehicles.¶
(2) Any merchandise sold or kept for sale on the premises must be reasonably incident and accessory to the operation of an automobile service station.¶
(3) No outdoor or open display of merchandise or wares shall be permitted except as follows:¶
(a) Oil for use in servicing motor vehicles, provided that it is kept in cans neatly racked or stacked and provided that no such container shall exceed a capacity of five quarts.¶
(b) New tires for sale, provided that they are displayed in a single, floor-level rack containing not more than six new tires and located immediately adjacent to the main building.¶
(c) New storage batteries for sale, provided that they are displayed in a customary rack holding no more ... [1]

(2) Nothing herein contained shall prevent the restoration of a building destroyed for any reason, including, but not limited to, fire, explosion, act of God, act of war, voluntary demolition or negligence, to the extent of no more than 50% of its current reproduction value, or prevent a change of its existing use under the limitations provided in § **245-18**, but any building destroyed in the manner aforesaid to an extent exceeding 50% of its reproduction value at the time of such destruction may be reconstructed and thereafter used only in such a manner as to conform to all the provisions of these land use ordinances.
(3) No structure in process of completion or demolition and no ruins from fire or other casualty shall be abandoned in a disorderly, unsightly or hazardous state. Such structure shall be considered to have been abandoned when work to remedy the improper condition has not been initiated within 60 days after the occasion of the casualty, or, if initiated, work has been discontinued with the owner's consent for 30 or more consecutive days or for more than 30 days out of 60 days. Each day's abandonment shall be considered as a separate violation of this provision of these land use chapters.

I. Office and Light Industrial Zones.
(1) A planted buffer, measured 100 feet deep from the property boundary, shall be provided within any OL-1 or OL-2 Zone along any lot line abutting a residential area or zone. The plant materials and the planting design shall be in accordance with criteria for such plantings in Chapter **208**, Subdivision of Land and Site Plan Review.
(2) All yards that are not used for necessary drives, walks and permitted accessory uses shall be appropriately landscaped with trees, shrubs, flowers and grass lawns or other suitable ground cover as approved by the Planning Board.
(3) There shall be no vehicular access to any use established in any OL-1 or OL-2 Zone from any street that primarily serves residential neighborhoods and is not an arterial street.
(4) The maximum size of an undivided building or a building section which is offset from other building sections at least 20 feet shall not exceed 80,000 square feet of building coverage.
(5) More than one principal building may be constructed in the OL-1 and OL-2 Zones, subject to all applicable regulations, and with a minimum distance between the adjacent buildings equal to the height of the taller of the two facing walls measured at the point where the buildings are closest, but not less than 20 feet.

J. Performance standards. Before the issuance of any construction permit or certificate of occupancy for any construction, alteration or conversion or use of any building, structure or land, all of the following regulations shall be complied with:

(1) Fire and explosion hazards. All activities shall be carried on only as permitted and regulated by the laws of the United States of America and the State of New Jersey in structures which conform to the standards of the National Board of Fire Underwriters' Laboratories, Inc., or Borough of Mountain Lakes ordinances, whichever are more restrictive. All operations shall be carried on, and explosive raw materials, fuels, liquids and finished products stored, in accordance with the standards of such Underwriters' Laboratories, Inc. Buildings, if required by ordinance, shall be equipped with automatic sprinklers which conform to the standards of the Underwriters' Laboratories, Inc.

(2) Radiation. Any industrial or other operations or processes involving any form of radioactive materials, radioactivity or microwave and other electric radiations shall be conducted in accordance with the New Jersey Radiation Protection Act and Code, performance standards in the National Health and Safety Act of 1968 and other applicable state and federal regulations as administered by the Bureau of Radiation Protection, New Jersey Department of Environmental Protection and related health agencies.

(3) Smoke, fumes, gases, dust and odors.

(a) There shall be no emission of any smoke, fumes, gas, dust or odors, except in accordance with the standards established in and by the New Jersey Air Pollution Code. These and any other atmospheric pollutants as regulated in the New Jersey Air Pollution Control Code are prohibited.

(b) Odorous matter released from any operation or activity shall not exceed the odor threshold concentration beyond the lot lines, measured either at ground level or habitable elevation in accordance with the Standard Method for Measurement of Odor in Atmosphere (dilution method), 1972 Annual Book of the American Society Testing and Materials, Philadelphia, Pennsylvania.

(4) Vibration. There shall be no vibration other than noise which is discernible to the human sense of hearing beyond the immediate site on which such use is conducted.

(5) Noise.

(a) There shall be no noise created on any property which may result in sound in excess of the standards listed below when measured at any point on the property line of the lot on which the use or source of sound is located, unless a variance is granted by the appropriate approving authority:

[1] Continuous airborne sound which has a sound level in excess of 65 dBA[a] from 8:00 a.m. to 8:00 p.m. or 50 dBA from 8:00 p.m. to 8:00 a.m.
[2]
Impulsive sound in air which has an impulsive sound level of 80 dBA.

(b) Measurement of sound level shall be in accordance with the provisions of N.J.A.C. 7:29-1.1 et seq., which is hereby adopted by reference.

(c) Compliance with these requirements is subject to review by a professional chosen by the Planning Board as needed.
(6) Petroleum storage. Any storage of petroleum products shall meet all applicable federal, state and local state codes.

K. Accessory uses.
(1) All accessory uses shall be included in computing maximum improved lot coverage.
(2) No accessory structure or improvement shall be erected or constructed unless and until:
(a) A construction permit for such structure or improvement has been issued.
(b) Either a construction permit or a certificate of occupancy, or both, has been issued for the main use or structure to which it is accessory.
(3) No accessory structure or improvement shall be used or occupied unless and until:
(a) A certificate of occupancy for such structure or improvement has been issued.
(b) The main use or structure to which it is accessory is being used and occupied and a certificate of occupancy for such main use or structure has been issued.
(4) No accessory use, structure or improvement shall be permitted unless it is located upon the same lot as the main use or structure to which it is accessory; provided, however, that access driveways and/or parking facilities to serve uses within the R-AH Zone shall be permitted on any adjacent lot located in the R-A Zone, subject to Planning Board review and approval.
(5) No accessory structure or improvement shall be located within the area of the front, side or rear yard setback requirements, except for a retaining wall as defined, a fence in accordance with Subsection **P**, or parking as provided in Schedule II.
(6) When any accessory structure is attached to the principal building, it shall be considered a part of such building and as such shall comply with all regulations applicable to the principal building.

(7) No fence or other accessory structure shall be located closer to a street line than the principal building on the lot. Any accessory structure located within 10 feet of the principal building shall be considered part of such building.
(8) No private garage or other structure accessory to a dwelling in a residence zone shall be used or occupied for housing of persons or animals and shall be used only for the storage of automobiles, recreational vehicles, trailers, boats, and other household personal property owned by residents of the dwelling unless otherwise prohibited or regulated by ordinance or other applicable law.

L. Off-street parking.
(1) Off-street parking shall be provided in accordance with the accompanying Schedules II and III.[3] If any applicant can clearly demonstrate to the Planning Board that, because of the nature of his operation or use, the parking requirements of this section are unnecessary or excessive, the Planning Board shall have the power to approve a site plan showing less paved area for parking than is required by this section; provided that a landscaped area of sufficient size to meet the deficiency shall be set aside and reserved for the purpose of meeting future off-street parking requirements in the event that a change of use of the premises shall make such additional off-street parking spaces necessary.
(2) The requirements for uses not listed in Schedule III shall be the same as for the most similar use which is listed. For mixed uses, the requirement shall be the total of the requirements for each use computed separately.
(3) Off-street parking facilities shall be provided on the same lot as the building to which they are accessory unless during site plan review and approval the Planning Board approves a convenient nearby location as an alternate.
(4) The minimum dimensions of an off-street parking space shall be a rectangle 18 feet in length and 10 feet in width, except that the Planning Board may reduce the required width to not less than 8 1/2 feet when the proposed use warrants. The aisle width shall be as follows:

Parking Angle (degrees)	**Minimum Aisle Width (feet)**
30°	12
45°	13
60°	18
90°	24

(5) Off-street parking spaces for residential lots may include garage areas as well as separate outdoor parking areas and driveways. Such spaces and driveways need not all have separate access but shall be distinctly delineated and maintained for the purpose and shall have a firm surface.
(6) Off-street parking facilities for other than residential use shall be paved, drained, lighted and maintained in accordance with all pertinent Borough ordinances and regulations, and shall be arranged for convenient access and safety of pedestrians and vehicles subject to exceptions in cases of home occupations if approved by the Planning Board. Such facilities shall not be used for storage or other unrelated purposes.
(7) Off-street parking facilities for other than residential use which are visible from a public street shall be screened from the street by planting or other means approved by the Planning Board.
(8) In approving a site plan, the Planning Board may:
(a) Increase the required minimum off-street parking requirement, based upon reasonable expectations as to the number of automobiles that a particular use may attract; and
(b) Impose a maximum limitation on the number of off-street parking spaces based on the nature and character of the area in which the premises are located.
(9) In no case shall there be kept in the open for more than 30 days any vehicle which cannot be operated on a public highway by reason of legal, mechanical or other restrictions.

M.
Recreational vehicles.
(1) For the purpose of this subsection, the term "recreational vehicle" shall mean a boat; a boat or any other vehicle mounted on a trailer; an automobile trailer not affixed to a foundation; a non-self-propelled or self-propelled house trailer, camper or motorized home so constructed as to permit the occupancy thereof as a dwelling or sleeping place for one or more persons and having no foundations other than wheels, skids, jacks, or other similar device integral with or portable by such recreational vehicle.
(2) No recreational vehicle shall be stored or parked in any zone, or in and on any premises in any zone, except in accordance with, and as may be permitted by, Subsection **M(3)**, **(4)** and **(5)** herein and provided that any such recreational vehicle shall not be used as living quarters while stored or parked.
(3) Any recreational vehicle may be stored or parked as follows:

(a) In a garage or boathouse.
(b) Temporarily in the driveway of any premises for periods not to exceed 48 hours for purposes of loading and unloading and for emergencies.
(c) Temporarily at a motor vehicle service station for the purpose of necessary repairs.
(4) In addition to the provisions of Subsection **M(3)** above, any recreational vehicle which is 20 feet or less in length, excluding the hitch in case of trailers, and five feet or less in height, excluding the mast in case of boats, may be stored or parked as follows:
(a) Where the side yard of any premises is, or exceeds, 15 feet, then to the rear of the front setback line of the main building on the premises.
(b) Where the side yard of any premises is less than 15 feet, then to the rear of the main building on the premises.
(c) Temporarily in the driveway of a resident owner of any premises by a guest of the resident provided that only one such vehicle is so parked at one time and that all such parking at any one premises shall not exceed 21 days in any one calendar year.
(5) In addition to the provisions of Subsection **M(3)** above, any recreational vehicle which is 20 feet or less in length, excluding the hitch in case of trailers, and nine feet or less in height but more than five feet, excluding the mast, in the case of boats, may be stored or parked as follows:
(a) In such a location on the premises, and to the rear of the front setback line of the main building on the premises, where the vehicle is or can be effectively screened, by natural vegetation if possible consisting of trees, shrubs or other plant life, from view from neighboring areas to the end that the vehicle as stored and parked on the premises shall not be clearly visible either from the street or from adjoining properties; provided that no vehicle shall be so stored or parked unless and until the Planning Board has approved both the proposed location and the actual or proposed screening of the vehicle on the premises. Any person desiring to so store or park a vehicle on premises shall submit a location and screening plan to the Planning Board for its review, consideration and approval. The Planning Board may modify such plan, require additional or substitute screening, and generally take such action as may be necessary to implement the foregoing. Without limitation, the Planning Board may also eliminate, reduce or modify any possible requirement of additional screening in the event that topographical or other natural features render unnecessary the planting of additional natural vegetation to implement the foregoing.

(b) Temporarily in the driveway of a resident owner of any premises by a guest of the resident, provided that only one such vehicle is so parked at one time and that all such parking at any one premises shall not exceed 21 days in any one calendar year.

N. Like buildings.

(1) No construction permit shall be issued for the erection of any building for occupancy as a dwelling if it is like or substantially like any neighboring building then in existence, or for which a building permit has been issued, in more than three of the following six respects:

(a) Height of the main roof ridge, or, in the case of a building with a flat roof, the highest point of the roof beams, above the elevation of the first floor.

(b) Height of the main roof ridge above the top of the plate; all flat roofs shall be deemed identical in this dimension.

(c) Length of the main roof ridge, or, in the case of a building with a flat roof, length of the main roof.

(d) Width between outside walls at the ends of the building measured under the main roof at right angles to the length thereof.

(e) Relative location of windows in the front elevation or in each of both side elevations with respect to each other and with respect to any door, chimney, porch, or attached garage in the same elevation.

(f) In the front elevation both:

[1] Relative location with respect to each other of garage, if attached, porch, if any, and the remainder of the building; and

[2] Either the height of any portion of the building located outside the limits of the main roof, measured from the elevation of the first floor to the roof ridge, or, in the case of a flat roof, the highest point of the roof beams; or the width of such portion of the building, if it has a gable in the front elevation, otherwise length of the roof ridge or the flat roof in the front elevation.

(2) Buildings shall be deemed to be like each other in any dimension with respect to which the difference between them is not more than two feet. Buildings between which the only difference in relative location of elements is end to end or side to side reversal of elements shall be deemed to be like each other in relative location of such elements. In relation to the premises with respect to which the permit is sought, a building shall be deemed to be a neighboring building if the lot upon which it or any part of it has been or will be erected is any one of the following lots, as shown on the Tax Map of the Borough:

(a) Any lot on the street, upon which the building to be erected on such premises would front, which is the first or the second lot next along such street in either direction from the premises, without regard to intervening street lines;
(b) Any lot on any part of the street line frontage of which is across the street from such premises or from a lot referred to in Subsection **N(2)(a)** above;
(c) Any lot on any part of the street line frontage of which faces the end of, and is within the width of, such street, if there are fewer than two lots between the premises and the end of the street;
(d) Any lot on another street which adjoins such premises on such other street; or
(e) Any lot on any part of the street line frontage of which is across such other street from the premises or from a lot referred to in Subsection **N(2)(d)** above, provided that, notwithstanding any of the foregoing provisions of this section, no building shall be deemed to be a neighboring building in relation to the premises if its rear elevation faces the street upon which the building to be erected on the premises would front.

O.
Number of principal buildings. Except as provided in OL Zones, only one principal building may be erected on any one lot.

P. Fences.
(1) In Zones A, B, OL-1 and OL-2:
(a) No fence is permitted in a front yard.
(b) In side or rear yards, a fence need not conform to setback requirements.
(2) In residential zones:
(a) No fence is permitted in a front yard.
[1] Exception to no fences in front yard.
[a] Freestanding stone walls, using natural fieldstone and mortar, are permitted to a maximum height of 30 inches from finished grade. Stone piers not exceeding 24 inches by 24 inches by four feet zero inches high are permissible to act as anchors at the end of freestanding stone walls or can stand alone with no wall.
[b] The natural fieldstone walls and piers are to be consistent with the general appearance of stone walls in the Borough of Mountain Lakes, installed on footings to meet minimum depth requirements for a structurally sound, freestanding wall.
(b) In rear or side yards, the only fences permitted are:

[1] A fence of durable material and of workmanlike construction, not more than six feet in height and conforming to setback requirements. Materials subject to sagging, warping or other distortion under normal usage shall not be considered as durable for the purposes of this subsection.
[2] A swimming pool fence of a minimum height of four feet conforming to all state requirements and to all setback requirements.
(3) Fences around areas to be used solely to compost vegetation. These may be of wire construction suitable for the purpose and do not need to conform to setback requirements, but shall not exceed four feet in height, eight feet in length on any side or 64 square feet in area, nor encompass more than two areas.
(4) Fences to protect gardening areas during growing and harvesting seasons. These may be of wire construction suitable for the purpose, but shall meet the other requirements of Subsection **P(2)(b)[1]** above.
(5) Fences on lakefront property to protect against intrusion by geese and other unwanted waterfowl. Fences shall not exceed 24 inches in height, shall be of green wire, shall be temporary in nature except if part of a hedgerow, shall not be permanently anchored and shall be readily removable.

Q.
Dish antennas.
(1) In residential zones, a dish antenna shall be permitted under the following conditions:
(a) It shall be only on a lot that contains a principal structure.
(b) It shall be designed for use by the residents of the principal structure only, except where the townhouse option has been elected.
(c) In the Residential RC-3 Zone where the townhouse option has been elected, only one dish antenna for common use is permitted per block of common wall houses. All other residential zone regulations apply.
(d) No lot may contain more than one dish antenna.
(e) Only a receiving dish antenna is permitted.
(f) A construction permit is required for any antenna installation. The fee shall be as specified in § 111-3B of this Code.
(g) A ground-mounted dish antenna is permitted as an accessory use, subject to the following regulations:
[1] A dish antenna may be located only in a rear yard and shall meet all setback requirements.
[2] Any such antenna shall be a freestanding structure mounted on and attached to the ground by a concrete pad.

[3] No dish antenna shall have a diameter exceeding six feet nor extend above the ground more than eight feet.
[4] An antenna shall be made only of black or gray mesh.
[5] Every dish antenna shall be screened by evergreen plantings in order to minimize to the greatest extent possible noise and visibility from any adjacent property or street. Screening shall not be required to the southwest. Plantings may be waived if natural terrain and landscaping provide adequate screening. The five-year growth potential of any evergreen plantings to be used shall be considered when determining acceptable spacing and heights of such plantings.
[6] Power control and signal cables to or from the antenna shall be underground cable complying with applicable code requirements.
(h) A roof-mounted dish antenna is permitted as a conditional use, subject to the provisions of § **245-16A**, and subject to the following specific regulations:
[1] It may not exceed three feet in diameter.
[2] It shall be made of black or gray mesh aluminum, or material of comparable weight.
[3] It may not project above the ridgeline of the roof and shall be mounted only on the rear of the building.
(2) In Business Zones A and B and in OL-1 and OL-2 Zones, a dish antenna, for receiving purposes only, shall be permitted as a conditional use, subject to Planning Board regulation, to ensure aesthetics and safety provisions compatible with the standards of the community.

R. Conservation zone regulations. No permanent building or structure shall be erected in a conservation zone except those structures deemed necessary by the Borough Council for recreational or environmental purposes or for the maintenance of the area.

S. Child-care centers. Child-care centers shall be licensed under the New Jersey Child Care Center Licensing Law, N.J.S.A. 30:5B-1 et seq., and/or any other statutes and regulations as may from time to time apply.

T. Storage of solid waste and recyclable items. Solid waste and recyclable items from all uses other than single-family homes, if stored outdoors, shall be placed in metal or plastic receptacles within a screened refuse area subject to the following minimum standards:
(1) The screened refuse area shall not be located within any front yard.

(2) The area shall be surrounded by a fence or wall suitably landscaped to provide screening of the view of refuse from adjoining properties or public streets. Any such fence shall be exempt from the provisions of any Mountain Lakes ordinance regulating fences, except that no such fence shall exceed 10 feet in height.
(3) Design for screening of the refuse area shall be subject to the approval of the Construction Official.
(4) In any site plan, if outdoor storage is not proposed, the methods proposed for accommodating solid waste and recyclables within the structure shall be detailed on the plan. The Planning Board may require that a suitable outdoor area be set aside, but not improved, for a future refuse storage area.

U. Wireless telecommunications facilities. Wireless telecommunications facilities are permitted in all zones as a conditional use as regulated by § **245-16** and as provided herein:
(1) Anything herein notwithstanding, a wireless telecommunications facility may exceed the area, height and yard requirements of the district in which it is located, provided that it shall satisfy the requirements of a conditional use as set forth in § **245-16** and the requirements and conditions as follows:
(a) Height.
[1] Where permitted, wireless telecommunications towers and antennas may exceed the maximum building height limitations, provided that the height has minimal visual impact and is no greater than required to achieve service area requirements and potential collocation within the Borough of Mountain Lakes.
[2] Wireless telecommunications equipment facilities shall be subject to the minimum height restrictions of the zoning district in which they are located.
(b) Setback.
[1] Telecommunications towers and antennas shall have a setback equal to the height of the tower or antenna.
[2] Wireless telecommunications equipment facilities shall be subject to the minimum bulk and height requirements of the zoning district in which they are located.

V.
Emergency generators. Generators for use during power outages on an emergency basis are permitted in all zones subject to the following conditions:
(1) Units must be installed in conformity with the property setbacks for the appropriate zone for the principle structure.
(2) The sound output for the unit cannot exceed 70 db at 23 feet from the unit.

(3) An improved lot coverage calculation is required for units installed on a pad over 12 square feet.
(4) Units installed in the front yard shall be surrounded by landscape screening.
(5) The testing, cycling and maintenance of all units will be conducted between the hours of 8:00 a.m. and 8:00 p.m. to be consistent with the Noise Ordinance (§ **160-2**) which shall apply to emergency generators.

Page 7: [1] Deleted	Chris Richter	6/4/19 3:15:00 PM

BOROUGH OF MOUNTAIN LAKES

LISTED IN NATIONAL AND STATE REGISTERS OF HISTORIC PLACES

Agenda Management Discussion

Prepared by Mayor Barnett
October 14, 2019

Objective of today's discussion:

- Take a quick look back at what ground we have covered in 2019
- Consider remaining agenda items for 2019… and into 2020

Borough Council has had a robust 2019 agenda:

- 2019 Budget process, including three stand-alone budget workshops and quarterly reviews
- Numerous agenda items related to the Borough's Affordable Housing Plan (and still more to go…)
- Several agenda items related to the Sunrise Assisted Living Development
- Infrastructure projects, including several discussions/updates on the Island Beach project
- Proposed Tree Replacement Ordinance
- Proposed Historic Preservation Ordinance
- Proposed Route 46 Zoning Change Ordinance
- Joint meeting with the Board of Ed
- Council Goals Discussions

Pages 3-4 of this document, a summary of key agenda items YTD, is provided as back-up

Anticipated agenda (*subject to change)* for our remaining 2019 Borough Council and other special meetings:

10/28/19	Discussion Items:	Developer Fee Ordinance Green Building Resolution
	Ordinance Intro:	Tree Replacement Ordinance East-Bound Rt 46 Ordinance
10/30/19	***Special Presentation: Sunset Dam***	
11/13/19	Discussion Items:	Accessory Apartments – Recommended Policy & Procedures Historic Landmark Ordinance
	Ordinance Intro:	Developer Fee Ordinance
	Ordinance Adoption:	Tree Replacement Ordinance East-Bound Rt 46 Ordinance
	Resolution:	Green Building Resolution
11/25/19	Ordinance Intro:	Historic Landmark Ordinance
	Ordinance Adoption:	Developer Fee Ordinance
	Resolution:	Accessory Apartments – Recommended Policy & Procedures
12/09/19	Discussion Item:	Third Quarter 2019 Current Budget Report Third Quarter 2019 Water Budget Report & Sewer Budget Report Trust Balances Capital Account Balances Year-End Council Goals Review
	Ordinance Adoption:	Historic Landmark Ordinance
12/09/19	**Volunteer Recognition Event**	

Other (Confirmed & Proposed) Agenda Items for 2019… and into 2020:

- Manager's Report Updates
  - Infrastructure Project Updates: Beach projects; Borough Hall & Public Safety Facility Renovation Project; Sunset Dam; Morris Avenue and other Road, Curb & Sidewalk projects
  - Recommendations for Recycling Center
  - Technology Strategy Review Update
  - Commemorative Bench Program
- Well Ordinance
- Water Sources for New Developments – would we encourage use of alternate sources?
- Plastic Bag Ban Ordinance
- Traffic & Safety recommendations – Wildwood traffic/safety concerns
- 2020 Budget & Long-Term Capital Plan
- 2020 Fee Ordinance
- Discussion focused on the Borough Taxpayer: Citizens Tax Summary - current #'s, historical trends and key metrics to track; how best to present tax information to the public, e.g. annual tax letter; opportunities for taxpayer relief (consider a joint meeting with the BOE and/or the County)
- Discussion focused on Economic Development: EDAC's goal of $100M in new rateables
- Discussion focused on Marketing & PR: How best to get the good word out about our community
- **Others?** _____

Let's be thoughtful about how we can make the most of our time together as Borough Council:

1. What agenda items are highest priority – and are there others to add to this list?
2. How best to take care of routine business in an efficient, focused manner?

2019 Borough Council Meeting Agendas

01/07/19	**Reorganization Meeting**	
01/16/19	**Budget Workshop #1**	
01/22/19	**Budget Workshop #2**	
01/28/19	Executive Session	Tax Appeal Settlements
	Special Presentation:	Proclamation for Radon Awareness Month
	Discussion Items:	Resolution in Support of the Current Level of Statewide Library Delivery Services
		2019 Borough Council Goals
	Resolution:	R68-19, Settlement to Resolve the Borough's Fair Share Housing Obligation
02/11/19	Executive Session	Matters of Attorney Client Privilege: Grunden's Pond
	Discussion Items:	2018 Year End Budget Review
		2019 Budget Discussion
		2019 Borough Council Goals *(postponed)*
	Attorney's Report:	Minimum Wage Legislation
02/25/19	Discussion Items:	Capital Budget: 2018 Year End Review and Prior Years Unspent
		Proposed 2019 Capital Budget
		2018 Borough Council Goals Year End Review
		2019 Borough Council Goals
	Attorney's Report:	Update on Affordable Housing Litigation
	Ordinance Intro:	Ordinance 01-19, COLA
03/05/19	**Budget Workshop #3**	
03/11/19	Executive Session:	Matters of Personnel - Clerk's Position
	Discussion Item:	Introduction of the 2019 Municipal Budget
	Ordinance Adoption:	Ordinance 01-19, COLA
03/25/19	**Joint Meeting with Board of Education**	
	Special Presentation:	Proclamation for Mark Prusina
	Discussion Items:	Shared Services Agreement between the Borough and Board of Education
		Borough Hall Renovation Project
	Ordinance Intro:	Ordinance 02-19, Capital Bond Ordinance
04/08/19	Executive Session:	Contract Negotiations – BOE Shared Services Agreement
	Special Presentation:	Arbor Day Proclamation
	Committee Report:	Shade Tree Commission: Proposed Tree Replacement Ordinance
	Discussion Items:	Budget to Be Read by Title
		Public Hearing and Adoption of the 2019 Municipal Budget
		Self-Examination of Budget
	Ordinance Adoption:	Capital Bond Ordinance
	Resolution:	Salary Resolution
04/22/19	Executive Session:	Tax Appeals
	Special Presentation:	ACS Relay for Life
		Developer Presentation – 372 Route 46 – Block 2, Lot 2 (Zeris Inn Property)
	Discussion Items:	Affordable Housing Plan Implementation Ordinances:
		1) Affordable Housing Ordinance, including Mandatory Set-Aside Plan
		2) Affirmative Marketing Plan
		3) Spending Plan
		4) Overlay Zoning
		5) Accessory Apartments Plan and Zoning
		6) Development Fee Ordinance
05/13/19	Discussion Item:	First Quarter 2019 Current Budget Report
		First Quarter 2019 Water Budget Report & Sewer Budget Report

		Trust Balances Capital Account Balances
	Manager's Report:	Update on Shared Services Agreement with BOE Report from Chief Bennett – Wildwood Traffic Concerns
	Ordinance Intro:	Affordable Housing Plan Implementation Ordinances: Ordinance 3-19: Zoning & Establishing Article VI Affordable Housing Ordinance 4-19: Amending Chapter 246, Zoning of the Code of the Boro of ML Ordinance 5-19: Affirmative Fair Housing Marketing Plan Ordinance 6-19: Accessory Apartments Plan & Zoning Ordinance 7-19: Establishing Affordable Housing Development Fees Ordinance 8-19: Spending Plan for the 3rd Round Planning Period
05/29/19	Ordinance Adoption:	Affordable Housing Plan Implementation Ordinances: Ordinance 3-19: Zoning & Establishing Article VI Affordable Housing Ordinance 4-19: Amending Chapter 246, Zoning of the Code of the Boro of ML Ordinance 5-19: Affirmative Fair Housing Marketing Plan Ordinance 6-19: Accessory Apartments Plan & Zoning Ordinance 7-19: Establishing Affordable Housing Development Fees Ordinance 8-19: Spending Plan for the 3rd Round Planning Period
06/10/19	Discussion Items:	Historic Landmark Ordinance Proposal Council Meeting Start Time
06/24/19	Committee Report: Discussion Item:	Ec Development Advisory Committee: East-Bound Rt. 46 Ordinance Update Discussion of the 2018 Annual Audit Corrective Action Plan
	Ordinance Intro:	Ordinance 09-19: Repealing Chp 115, Art. II, "Commercial Fertilizer Application" Ordinance 10-19: Road Improvements Bonding, $610k & $105k in bonds/notes
07/08/19	Executive Session: Discussion Item: Ordinance Intro:	Matters of Litigation: Tax Appeals Beach Project: Island Beach Facilities Ordinance 11-19: Ordinance authorizing Employee Salary and/or Wages
07/22/19	Discussion Items:	Beach Project: Island Beach Facilities Mid-Year Council Goals Review
	Ordinance Adoption:	Ordinance 09-19: Repealing Chp 115, Art. II, "Commercial Fertilizer Application" Ordinance 10-19: Road Improvements Bonding, $610k & $105k in bonds/notes Ordinance 11-19: Ordinance authorizing Employee Salary and/or Wages
08/26/19	Special Presentation:	Mountain Lakes Police Department Update: Wildwood Back to School
09/09/19	Discussion Items:	Second Quarter 2019 Current Budget Report Second Quarter 2019 Water Budget Report & Sewer Budget Report Trust Balances Capital Account Balances
	Manager's Report	Update of Beach Facility Rehabilitation Project – Island Beach Water and Sewer Rates
	Resolutions:	Non-Consent Agenda Resolutions related to Sunrise Development, Inc: Developer's Agreement; Public Waterworks Approval; Treatment Works Approval; Landscaping Agreement; Deed Restriction Requiring Affordable Units
09/23/19	Committee Report: Manager's Update: Ordinance Intro:	Ec Development Advisory Committee: East-Bound Rt 46 Ordinance Update Update of Beach Facility Rehabilitation Project – Island Beach Ordinance 12-19, Amending Chp 111, Revised Gen. Ords & Fee Schedule Ordinance 13-19, Authorizing Salary and/or Wages of Officers & Employees
10/14/19	Discussion Items:	Tree Replacement Ordinance East-Bound Rt. 46 Ordinance Update Agenda Management
	Manager's Report Ordinance Adoption:	Annual Best Practices Review Ordinance 12-19, Amending Chp 111, Revised Gen. Ords & Fee Schedule Ordinance 13-19, Authorizing Salary and/or Wages of Officers & Employees

BOROUGH OF MOUNTAIN LAKES

LISTED IN NATIONAL AND STATE REGISTERS OF HISTORIC PLACES

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TO: Honorable Mayor and Borough Council
SUBJ: Manager's Report
CC: Marcy Gianattasio, Borough Clerk
Robert Oostdyk, Borough Attorney

The following represents the Manager's report for the Borough Council meeting of October 14, 2019.

Best Practices Inventory – This year's annual Best Practices Inventory contains 84 questions of which 46 were unscored survey questions. Of the 38 scored questions, a score of 30 or above must be attained to avoid any loss of state aid. The Borough attained a score of 40.5. The Inventory must be electronically filed with the State no later than October 30th. The complete Inventory document is attached to this report.

Trash Day – Saturday, October 19th (8:00am - 3:00pm) has been set for the Borough's annual trash day. For further information, please visit the Borough's website or contact our DPW office.

Recycling Issues - We continue to have considerable issues with contamination of our collected recycling materials. The issues are wide ranging and involve both the vendor collecting the material and the residents improperly disposing of non-recyclable material in the recycling bins. I will be meeting with our DPW Director and our recycling collection vendor early next week and then our DPW committee later in the week. I am expecting to have recommendations on how to resolve these issues before Borough Council within the next several weeks.

Please reach out with questions or concerns.

Mitchell

Best Practices Inventory

Mountain Lakes Borough

Printable Current Answers

001	Core Competencies	Personnel	
The "Diane B. Allen Equal Pay Act" (P.L. 2018, c. 9) modifies current law to strengthen protections against employment discrimination and promote equal pay for all groups protected under the Law Against Discrimination (N.J.S.A. 10:5-1 et seq.). Have appropriate municipal officials (including labor counsel as necessary) evaluated whether your municipality is in compliance with this law?			[1.00] Yes
002	Core Competencies	Personnel	
P.L. 2017, c. 183, signed into law on August 7, 2017, amends the Local Budget Law to require municipal and county governing bodies to certify compliance with the following Federal civil rights requirements when submitting their approved budgets with DLGS: that their hiring practices comply with the United States Equal Employment Opportunity Commission's "Enforcement Guidance on the Consideration of Arrest and Conviction Records in Employment Decisions Under Title VII of the Civil Rights Act of 1964." Local Finance Notice 2017-27 discusses this requirement in further detail. Has your governing body reviewed your municipality's policies on the use of criminal history when making personnel decisions, to ensure that those policies do not violate Title VII on the basis of either disparate treatment or disparate impact?			[1.00] Yes
003	Core Competencies	Personnel	
Has your municipality adopted a written vehicle use policy prohibiting personal use of municipal vehicles (except for commuting), and providing that employees authorized to use such vehicles for commuting to/from work have a fringe benefit value added to the gross income reported on the employee's W-2 (unless the vehicle meets the "qualified non-personal vehicle" criteria specified by the IRS)? Only answer "N/A" if your municipality does not have any municipally-owned vehicles.			[1.00] Yes
004	Core Competencies	Personnel	
Does your municipality have 1) an established documented process requiring department heads to submit notice of outside employment, and 2) upon receiving such notice, does your municipality have a documented process within its human resources function to determine whether a conflict of interest exists?			[0.00] No

005	Core Competencies	Personnel	
Payments for waivers filed before May 21, 2010 and maintained continuously since, cannot exceed fifty percent (50%) of the amount saved by the local unit as a result of the employee's waiver of coverage. For waivers filed on or after May 21, 2010, which is the effective date of P.L. 2010, c. 2, payments cannot exceed the lesser of twenty-five percent (25%) of the amount saved by the local unit as a result of the waiver, or $5,000. When calculating an employee's waiver payment, the local unit must deduct the employee's healthcare contribution obligation from the total premium cost. Local units have sole discretion as to whether or not to offer employees payments for waiver of health benefits, and may offer waiver payments below the statutory maximum. Health benefit waiver payments are statutorily excluded from collective bargaining. See Local Finance Notices 2010-12 and 2016-10 for further discussion on health benefit waiver payments. Are your municipality's healthcare waiver payments at or below the statutory maximum? "N/A" is only applicable where the municipality does not make payments in lieu of health benefits.		[1.00] Yes
006	Core Competencies	Personnel	
The Fair Labor Standards Act (FLSA) is a federal law requiring that overtime pay must be paid for all hours over 40 hours in a work week except for those employees classified as exempt and thus not entitled to overtime. Management employees such as elected officials, managers/administrators, municipal clerks, CFOs, public works superintendents, police chiefs and other department heads are typically classified as having exempt status and thus not entitled to overtime pay. Other municipal employees may also be classified as exempt under the FLSA (please consult labor counsel for detailed guidance). Exempt status also precludes overtime pay for time worked during emergencies, attendance at night meetings and participation in training sessions. Compensated leave time in lieu of cash payments is considered a form of overtime pay unless such leave is utilized in the same pay period. Does your municipality not pay overtime to employees classified as exempt under the FLSA?		[1.00] Yes
007	Core Competencies	Personnel	
Employee personnel manuals or handbooks serve as a valuable tool to convey a municipality's policies, procedures and benefits. Many insurance carriers encourage the adoption of such a document and offer discounted rates for their use. These publications should review employees' rights and obligations in areas including, but not limited to: discrimination, harassment, personal days, use of municipal vehicles, and political activity. Has your municipality adopted an employee personnel manual/handbook by resolution or ordinance? If yes, please provide in the Comments section the date of the meeting at which the personnel manual was adopted. If not yes, please type "Did Not Answer Yes" into the comment box.		[1.00] Yes Comment: September 8, 2014
008	Core Competencies	Personnel	
Has your municipality reviewed and updated its employee personnel manual/handbook by resolution or ordinance within the past three years? If yes, please provide in the Comments section the date of the meeting at which the personnel manual was updated. If not yes, please type "Did Not Answer Yes" into the comment box.		[0.00] No Comment: Did Not Answer Yes
009	Core Competencies	Personnel	
Does your municipality maintain centralized records for all time worked and all employee leave time earned and used?		[1.00] Yes

010	Core Competencies	Personnel	
N.J.S.A. 34:13A-8.2 requires public employers, including municipalities, to file with the Public Employment Relations Commission (PERC) a copy of all contracts negotiated with public employee representatives. This includes, but is not limited to, collective bargaining agreements, memoranda of understanding, contract amendments, and "side letter" or "side bar" agreements. Copies of same may be emailed to contracts@perc.state.nj.us. Has your municipality filed all current contracts with PERC?			[1.00] Yes
011	Core Competencies	Budget	
Does your municipality complete an initial draft of its annual budget no later than the first week of January (or first week of July if an SFY municipality), and obtain input in crafting the draft budget from elected officials and department heads as appropriate to the form of government?			[1.00] Yes
012	Core Competencies	Budget	
A formal policy regarding municipal budget surplus (i.e. fund balance) is crucial to making informed financial decisions, and the lack of a policy could lead bond rating agencies to downgrade your municipality's credit rating. In developing said surplus policy the CFO should analyze and explain at least a five (5) year trend of surplus, describing the factors causing each annual increase or decrease; to develop a realistic and sustainable surplus policy. Has your municipality adopted a written annual goal for the amount of surplus available in support of municipal operations?			[1.00] Yes
013	Core Competencies	Budget	
Revenue earned from Uniform Construction Code (UCC) fees must be dedicated to UCC enforcement. The amounts of UCC revenue generated and funds appropriated to UCC enforcement appear on the User-Friendly Budget as well as the UCC Annual Report submitted to the Division of Codes and Standards. Does your municipality's construction code fee schedule comply with the parameters set by N.J.A.C. 5:23-4.17, 5:23-4.18 and Local Finance Notice 2017-15, specifically does your municipality comply with the law prohibiting the imposition of UCC fee amounts greater than necessary to operate the UCC office?			[1.00] Yes
014	Core Competencies	Budget	
Has your municipality created an accumulated absence liability trust fund pursuant to N.J.A.C. 5:30-15.5?			[1.00] Yes
015	Core Competencies	Budget	
Does your municipality annually review 1) its fee schedules against revenue collected, and 2) its fee ordinance(s) to determine whether fees need to be brought more in line with expenses?			[1.00] Yes
016	Best Practices	Budget	
N.J.S.A. 40A:4-62.1 allows municipalities to establish a storm recovery reserve for purposes such as, but not limited to, snow, ice, and debris removal. Unexpended balances budgeted annually for storm recovery purposes may be lapsed into the reserve. Has your municipality established a storm recovery reserve to ensure the consistent availability of funds for this purpose?			[0.50] Yes

017	Best Practices	Budget	
Does your current year annual budget appropriate an amount for snow removal based on, at minimum, an average of the municipality's snow removal expenses over the last three (3) years? A Yes answer is permitted where the budget appropriation is below the three-year average, but the balance remaining in a snow removal or storm recovery reserve trust fund would bring the total amount equal to or above the three-year average.			[0.50] Yes
018	Core Competencies	Financial Administration	
Audit findings address areas needing improvement and ignoring these findings devalues the process. Municipalities should correct noted deficiencies. Have the audit findings in your municipality's 2017 audit been identified in a corrective action plan and not been repeated in the 2018 audit? If the answer is no, please list the repeat findings, along with the date the corrective action plan was submitted to DLGS, under Comments. Only answer "N/A" if there were no audit findings in the 2018 audit. If you did not answer no, please type "Did Not Answer No" into the Comment Box.			[0.00] No Comment: Finding 2018-01 Segregation of Duties - Concentration of duties and responsibilities in a limited number of individuals is not desirable from a control point of view. The borough does not maintain an adequate segregation of duties with respect to the recording and treasury functions. The Chief Financial Officer reviews and approves disbursements of funds, prepares the general ledger and reconciles the bank accounts for the respective funds or accounts. This is due, in part, to the limited number of personnel of the Borough and the decentralized nature of governmental collection procedures. Accordingly, management and the Borough Council should be aware of this situation and realize that the concentration of duties and responsibilities in a limited number of individuals is not desirable from a control point of view. Segregation of duties refers to separating those functions that place too much control over a transaction or class of transactions that would enable a person to perpetuate errors and prevent

perpetuate errors and prevent detection within a reasonable period of time. It is recommended that an adequate segregation of duties be maintained with respect to the recording and treasury functions. Finding 2018-02 During our review of the Municipal Court, which is operated as a shared service by another municipality, regular account records, it was noted that the reconciled bank balance at December 31. 2018 is less than the cash collections for the month of December 2018. This deficit appears to be due to bank charges incurred in prior years that were never reimbursed. In addition, there are also bank charges incurred in 2018 on the December 31, 2018 regular account bank reconciliation. It is recommended that the Municipal Court, operated as a shared servie by another municipality, regular bank account deficit and bank charges be reviewed for proper disposition. The corrective action plan was submitted to the DLGS on 7/11/19

019	Core Competencies	Financial Administration
Effective for CY2019/SFY2020 and CY2020/SFY2021 municipal budgets, the annual maximum contribution a municipality can appropriate for use by its volunteer fire companies or board of fire commissioners pursuant to N.J.S.A. 40A:14-34 is $154,518.75. In any municipality where there are more than three volunteer fire companies or fire districts, the governing body may appropriate an additional $50,000 annually for each additional volunteer company or fire district. At least 50% of the municipality's annual appropriation must be used by a volunteer fire company or board of fire commissioners for the purchase of fire equipment, materials and supplies. N.J.S.A. 40A:14-34 requires the volunteer fire company or fire district to provide the municipal governing body, on an annual basis, an accounting of the use of all municipal funds. See Local Finance Notice 2019-01 for further details. Is your municipality obtaining from each volunteer fire company or fire district an accounting of the use of all municipal funds?		[1.00] Yes

020	Core Competencies	Financial Administration	
N.J.S.A. 40:5-2 limits to $70,000 the maximum annual dollar amount that a municipality may contribute to a duly incorporated first aid and emergency or volunteer ambulance or rescue squad association, except that if any such associations experience extraordinary need, a municipality may contribute an additional amount of not more than $35,000 annually. Whenever the total annual contribution exceeds $70,000, the municipal CFO shall receive an audit performed by a CPA or RMA of the association's current year financial records which shall certify that such records are being maintained in accordance with sound accounting principles. If your municipality contributed in excess of $70,000 toward a first aid, ambulance, rescue or EMS squad in its current budget, was an audit performed pursuant to N.J.S.A. 40:5-2?		[1.00] N/A
021	Core Competencies	Financial Administration	
Local Finance Notice 2018-13 discusses the Local Finance Board's recent adoption of regulations permitting all local units, county colleges, and school district boards of education/boards of trustees to utilize standard electronic funds transfer (EFT) technologies for payment of claims. Use of EFT technologies such as, but not necessarily limited to, Automated Clearing House (ACH) transactions, wire transfers and e-checks are subject to certain fiscal, operational, and technological control requirements as a condition of use. Has your municipality considered 1) where the use of electronic payment methods could benefit the municipality; and 2) where the adopted regulations may require changes in the municipality's current claims payment procedures as pertain to electronic payment methods?		[1.00] Yes
022	Core Competencies	Financial Administration	
The Government Electronic Payment Acceptance Act (N.J.S.A. 40A:5-43 et seq.) and its implementing regulations (N.J.A.C. 5:30-9.1 et seq.) set forth requirements for municipalities accepting credit cards, debit cards, and other electronic fund transfer mechanisms as means of collecting payment. In part, N.J.A.C. 5:30-9.9 limits any surcharges or convenience fees charged by a municipality for handling and processing the transaction. Is your municipality adhering to N.J.A.C. 5:30-9.9 when charging surcharges or convenience fees relating to electronic payment acceptance?		[1.00] Yes
023	Core Competencies	Capital Projects	
Has your municipality adopted a capital program as defined by N.J.A.C. 5:30-4.2, meaning a moving, multi-year plan and schedule for capital projects (including prospective financing sources) and, when pertinent, first year operating costs and savings?			[1.00] Yes
024	Core Competencies	Capital Projects	
Is your municipality appropriating sufficient funding for maintenance, repair, and replacement of environmental and transportation infrastructure?			[1.00] Yes

025	Core Competencies	Capital Projects	
Does your municipality evaluate the age and condition of municipally-owned underground infrastructure (e.g. water and sewer mains) to determine whether age or condition necessitate repair or replacement before performing needed repairs or replacement in conjunction with a road resurfacing or road reconstruction project and coordinate with owners of non-municipally owned underground infrastructure to avoid having to redo a recently-completed road project? Only answer N/A if there is no underground infrastructure underneath any municipally-owned roads or your municipality does not own any roads.			[1.00] Yes
026	Core Competencies	Capital Projects	
If your municipality charges administrative fees for off-duty police traffic safety personnel on a public works or utility project, are such fees set by ordinance at an amount not exceeding the municipality's actual costs for administering the off-duty work? See Local Finance Notice CFO 2000-14 for further guidance.			[1.00] Yes
027	Core Competencies	Transparency	
The Local Government Ethics Law, designed to ensure transparency in government, requires local government officers to file annual Financial Disclosure Forms. Have all of your local elected officials filed their Financial Disclosure Form in 2019 that covers the 2018 calendar year?			[1.00] Yes
028	Core Competencies	Transparency	
Does your municipality maintain an up-to-date municipal website containing at minimum the following: past three years adopted budgets; the current year proposed budget (including the full adopted budget for the current year when approved by the governing body); most recent annual financial statement and audits; notification(s) for solicitation of bids and RFPs; and meeting dates, minutes and agendas for the governing body, planning board, board of adjustment and all commissions?			[1.00] Yes
029	Core Competencies	Transparency	
Has your municipality recodified its ordinances within the past five (5) years?			[1.00] Yes
030	Core Competencies	Transparency	
Are your municipality's codified and uncodified ordinances, including all current salary ordinances, available online?			[1.00] Yes
031	Best Practices	Transparency	
Does your municipality have an official social media account or accounts and, if so, is there a written policy establishing guidelines on access, use, and permitted content?			[0.50] Yes
032	Best Practices	Transparency	
Does your municipality feature a link on its website to the Division of Taxation's Property Tax Relief Program webpage at https://www.state.nj.us/treasury/taxation/relief.shtml?			[0.50] Yes

033	Core Competencies	Authorities	
Note: The following question does not apply to authorities with more than one member municipality. For those which this question does not apply, please type "N/A" into the comment box. Municipalities should annually evaluate the authority or authorities they created and publicly discuss their findings and conclusion. Findings and conclusions should address whether existing authorities continue to serve the public interest and are more efficient than other potential alternatives in providing services and financing public facilities. Within the past year, 1) has the above-referenced discussion appeared as a listed agenda item on a scheduled governing body meeting, and 2) do the findings and conclusion appear in publicly-available meeting minutes? Please identify the meeting date(s) under "Comments". Those that answer No should type "Answered No" into the comment box.			[1.00] N/A Comment: "N/A"
034	Best Practices	Authorities	
Local Finance Notice 2017-23 describes the avenues through which a municipality can consolidate multiple fire districts into a single fire district. Does your municipality have a single fire district or, if your municipality has multiple fire districts, is it reviewing the feasibility of consolidating its multiple districts into a single district? Only answer N/A if your municipality does not have a fire district.			[0.50] N/A
035	Core Competencies	Procurement	
Do your municipality's professional services contracts include a "not to exceed" amount?			[0.00] No
036	Best Practices	Procurement	
If your municipality contracts with an insurance broker for health insurance, and said contract exceeds the Local Public Contracts Law bid threshold, is your municipality's health insurance broker being procured through a competitive contracting or sealed bid process conducted pursuant to the Local Public Contracts Law?			[0.50] N/A
037	Best Practices	Procurement	
Insurance broker fees dependent on the amount of health insurance premiums or fees paid by the municipality are vulnerable to abuse as brokers could face conflicting incentives in seeking lower-cost health insurance alternatives. If your municipality contracts with an insurance broker for health insurance, is the structure for broker payments set at a flat-fee rather than on a commission basis to mitigate the risk of a broker recommending more expensive health insurance coverage to earn higher fees?			[0.50] N/A
038	Core Competencies	Cybersecurity	
A cybersecurity incident response plan is a set of instructions to help detect, respond to, and recover from network security incidents. These plans address areas such as cybercrime, data loss, and service outages. Does your municipality have a cybersecurity incident response plan?			[1.00] Yes
039	Core Competencies	Cybersecurity	
Does your municipality perform daily computer backups to off-network devices for all data files and operating application software?			[1.00] Yes

040	Core Competencies	Cybersecurity	
Does your municipality employ defensive software to protect its network and data from cyberattacks, including an email anti-virus filter and a firewall designed to block unauthorized network access?			[1.00] Yes
041	Core Competencies	Cybersecurity	
Are all municipal employees receiving ongoing cybersecurity training in malware detection, password construction, identifying security incidents and social engineering attacks?			[1.00] Yes
042	Unscored Survey	Shared Services	
Has your municipality explored new or expanded shared service opportunities with other local governments (including boards of education) within the past year?			[0.00] Yes
043	Unscored Survey	Shared Services	
If no shared services agreement was reached, please set forth under Comment the shared service considered, the local unit with whom it was considered, and the reason(s) why an agreement was not reached. If you did not answer yes to Question 42, please type "NA" into the Comment Box.			Comment: Morris County for tree services, agreement not reached because the County did not have capacity for the Borough.
044	Best Practices	Shared Services	
Has your municipality entered to a new or expanded shared services agreement this year with another local government entity?			[0.00] No
045	Best Practices	Shared Services	
Does another government entity handle all public safety and emergency dispatch functions for your municipality or, if your municipality has its own dispatch (whether directly staffed or outsourced to a private entity), has it explored having another government entity perform all dispatch functions? If the answer is Yes, please state in the Comment Box the government entity that provides the entirety your municipality's dispatch functions; or, if your municipality has its own dispatch, when discussions with other entities have occurred, with which entities, whether an agreement resulted and, where no agreement was reached, the reason(s) why. If you did not answer Yes, please type "Did Not Answer Yes" into the Comment Box.			[0.50] Yes Comment: Morris County Communications Dispatch Services
046	Best Practices	Shared Services	
Does your municipality have another government entity fulfilling all local public health functions; or if your municipality has its own health department or board of health, has it explored having another government entity perform all local public health functions? If the answer is Yes, please enter into the Comment Box the government entity that performs your municipality's public health functions; or, if your municipality has its own health department or board of health, when discussions with other entities have occurred, with which entities, whether an agreement resulted and, where no agreement was reached, the reason(s) why. If you did not answer Yes, please type "Did Not Answer Yes" into the Comment Box.			[0.50] Yes Comment: Township of Bloomfield

047	Core Competencies	Miscellaneous Operations	
Municipalities are encouraged to investigate all available grant opportunities; however, certain grants have conditions that pose additional budgetary costs (e.g. match dollars, hiring requirements). For all grants accepted within the past year, has your municipality evaluated whether the grant's benefits exceed the actual and/or potential costs associated with the grant?			[1.00] Yes
048	Best Practices	Miscellaneous Operations	
Does your municipality regularly evaluate opportunities for alternate revenue streams to help offset its property tax levy?			[0.50] Yes
049	Unscored Survey	Miscellaneous Operations	
Have all professional appointments requiring governing body approval been approved within 30 days after the municipality's annual reorganization meeting?			[0.00] Yes
050(a)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Financial Administration?			[0.00] No
050(b)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Capital Improvements?			[0.00] No
050(c)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Asset Management?			[0.00] No
050(d)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Tax Incentives?			[0.00] No
050(e)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Procurement?			[0.00] No
050(f)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Training and Support for Elected Officials?			[0.00] Yes

050(g)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Management Training?			[0.00] No
050(h)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Shared Services?			[0.00] No
050(i)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Risk Management?			[0.00] No
050(j)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS's new Local Assistance Bureau in the area of Ethics?			[0.00] No
050(k)	Unscored Survey	Miscellaneous Operations	
Would your municipality like to receive additional technical assistance from DLGS in any other area? If you answered Yes, please fill in under Comments what area or areas your municipality would like assistance.			[0.00] No
051	Unscored Survey	Miscellaneous Operations	
Has your municipality converted all mechanical parking meters (analog or digital display) to an electronic parking system (e.g. pay-and-display, numbered spaces, license plate)?			[0.00] N/A
052	Unscored Survey	Miscellaneous Operations	
Have public electric vehicle charging stations been installed on municipal property?			[0.00] No
053	Unscored Survey	Miscellaneous Operations	
Has your municipality implemented a web application that allows residents to submit service requests to municipal departments?			[0.00] Yes
054	Unscored Survey	Miscellaneous Operations	
Has your municipality implemented an emergency communication system that encompasses cell phones?			[0.00] Yes
055	Unscored Survey	Miscellaneous Operations	
How is residential garbage collected?			[0.00] Private hauler contracted by municipality

056	Unscored Survey	Miscellaneous Operations	
If your residential garbage is collected through a private hauler contracted by the municipality, did your municipality receive at least two bids in its latest procurement?			[0.00] No
057	Unscored Survey	Miscellaneous Operations	
If your municipality's residential garbage pickup is done through a private hauler contracted directly by residents, does your municipality know the number of hauler services servicing residents? If yes, please state in the Comments how many garbage haulers service your municipality's residents. If you did not answer yes, please type "Did Not Answer Yes" into the Comment Box.			[0.00] N/A Comment: did not answer yes
058	Best Practices	Miscellaneous Operations	
If your municipality provides residential garbage pickup or contracts with a private hauler to do so, is garbage pickup scheduled for no more than once-per-week?			[0.50] Yes
059	Unscored Survey	Miscellaneous Operations	
Does your municipality have a revenue-generating residential recycling program?			[0.00] Yes
060	Unscored Survey	Miscellaneous Operations	
What is the primary reason your municipality has not established a SALT charitable fund?			[0.00] Lack of resident interest
061	Unscored Survey	Miscellaneous Operations	
P.L. 2017, c.266, enacted in January 2018, permits municipalities to establish by ordinance a list of residents identifying themselves as needing special assistance in an emergency. This list, which can only be used for public safety purposes, is maintained by the municipal clerk and shall be cross-indexed by the name and address of each resident opting in to the list, identifying the special circumstances for each. Please review Local Finance Notice 2018-17 for further information. Has your municipality adopted an ordinance pursuant to P.L. 2017, c.266 to establish a special needs assistance list? If yes, please list in the Comments which type of assistance is predominantly needed. If you did not answer yes, please type "Did Not Answer Yes" into the Comment Box.			[0.00] No Comment: Did Not Answer Yes
062	Core Competencies	Ratables/PILOTs	
If your municipality's Director's Ratio (defined as the ratio of assessed values to true market values) is less than 85%, your municipality needs to undertake a reassessment/revaluation. Have at least 20% of properties in your municipality been inspected? Please state the percentage of properties inspected in the Comments. If you answered No or NA, type in the Comment Box "Answered No" or "Answered NA"			[1.00] N/A Comment: Answered NA

063	Core Competencies	Ratables/PILOTs
Before formalizing negotiations and entering into a Long-Term Financial Agreement, does your municipality have at least one staff member or contractually-retained professional evaluate all proposed Long-Term PILOTs to assure that the proposed agreement is a net-benefit to the municipality?		[1.00] N/A
064	Core Competencies	Ratables/PILOTs
Payments In Lieu of Taxes (PILOTs) can be a useful tool for economic development. However, municipalities must monitor PILOT agreements to ensure recipients comply with all agreement terms, particularly timely payment and reporting. Does your municipality have an official designated to monitor exemptions/abatements and ensure compliance with the PILOT agreement terms?		[1.00] N/A
065	Best Practices	Planning and Economic Development
Does your municipality actively maintain an inventory of buildings and vacant properties that would benefit from redevelopment? If yes, state how in the Comment Box or, if no, state "Did not answer Yes"		[0.50] Yes Comment: An excel spreadsheet is maintained
066	Unscored Survey	Planning and Economic Development
Is your municipality presently considering establishing a land bank entity pursuant to P.L. 2019, c.159 and, if so, which entity (if any) is being considered to operate the land bank?		[0.00] Not considering land bank
067	Unscored Survey	Planning and Economic Development
Does your municipality have a current community and/or economic development plan in place with established metrics, and regularly review and measure progress toward development goals set forth in the plan(s)?		[0.00] No
068	Unscored Survey	Planning and Economic Development
Does your municipality either employ or contractually retain a licensed professional planner?		[0.00] Yes
069	Unscored Survey	Planning and Economic Development
Does your municipality either employ an economic development staff person or contractually retain an economic development consultant?		[0.00] No
070(a)	Unscored Survey	Planning and Economic Development
The Office of Local Planning Services (LPS) in the Department of Community Affairs works with communities to achieve local land use and planning goals. As part of DCA's commitment to provide technical assistance to municipalities, our professional planning staff offers comprehensive planning services at no-cost to eligible local governments. Would your municipality benefit from assistance with respect to its Master Plan?		[0.00] No

070(b)	Unscored Survey	Planning and Economic Development	
Would your municipality benefit from LPS assistance with respect to Redevelopment Plans?			[0.00] No
070(c)	Unscored Survey	Planning and Economic Development	
Would your municipality benefit from LPS assistance with respect to Land Use Ordinances?			[0.00] No
070(d)	Unscored Survey	Planning and Economic Development	
Would your municipality benefit from LPS assistance with respect to Land Use Mapping?			[0.00] No
070(e)	Unscored Survey	Planning and Economic Development	
Would your municipality benefit from LPS assistance with respect to Economic Development Plans?			[0.00] No
070(f)	Unscored Survey	Planning and Economic Development	
Would your municipality benefit from LPS assistance with respect to Storm and Natural Disaster Resiliency?			[0.00] No
071	Unscored Survey	Planning and Economic Development	
P.L. 2017, c.253 permits a municipality to authorize its parking authority to serve as a redevelopment entity, subject to Local Finance Board approval. A parking authority so authorized may exercise redevelopment powers within an area in the municipality designated as in need of redevelopment or rehabilitation; however, revenue from fees charged for parking shall be utilized solely for the purposes set forth in N.J.S.A. 40:11A-6. Is your municipality considering seeking Local Finance Board approval to authorize its parking authority to serve as a redevelopment entity?			[0.00] N/A
072	Unscored Survey	Planning and Economic Development	
The New Jersey Redevelopment Authority (NJRA) provides financial and technical resources into urban redevelopment projects in eligible municipalities throughout the State. A list of eligible municipalities can be found at https://www.njra.us/maps. Is NJRA providing redevelopment financing to your municipality? Answer "NA" if your municipality is not on the list of eligible municipalities.			[0.00] N/A
073	Unscored Survey	Planning and Economic Development	
Have officials from your municipality participated in one or more workshops offered by NJRA's Redevelopment Training Institute (RTI)?			[0.00] No
074	Unscored Survey	Planning and Economic Development	
If your municipality has one or more opportunity zones, have you been actively marketing your zones to investors and developers? If yes, please state in the Comments whether this has resulted in one or more projects coming before your municipality for approval. If you did not answer Yes, please provide an explanation in the Comment Box.			[0.00] No Comment: Do not have an opportunity zone

075	Unscored Survey	Planning and Economic Development	
Is your municipality aware of any real estate development projects or businesses that will be using the Opportunity Zone tax incentive or receiving an Opportunity Fund investment?			[0.00] N/A
076	Unscored Survey	Planning and Economic Development	
If your municipality knows of any projects that are using or will be using the Opportunity Zone tax incentive, please include the name of each project, the full address, a short description that includes the primary developer (if applicable), estimated value of the development (i.e. total permitted value), and the project's status (if known) on the Excel form provided on DLGS's Best Practices webpage. Upload the Excel form using the "Attach File" button toward the bottom of your screen. If you have uploaded the Excel form, type "File Uploaded" in the Comment Box. If you have not uploaded the Excel Form, type NA in the Comment Box.			Comment: NA
077	Best Practices	Environment	
Has your municipality changed its master plan and zoning ordinances within the past two years to improve resliency in the face of extreme weather events? Only answer NA if your municipality has determined, after a review of its master plan and zoning ordinances within the past two years, that no such changes are necessary.			[0.00] No
078	Best Practices	Environment	
If your municipality has a combined sewer overflow (CSO) system, has the conversion to a non-CSO overflow system been incorporated into your municipality's capital improvement program? If your municipality does not have a CSO system, is it undertaking affirmative measures to reduce stormwater runoff? Non-CSO municipalities answering Yes should explain these measures in the Comment Box.			[0.50] Yes
079	Unscored Survey	Affordable Housing	
Does your municipality currently have an affordable housing element and fair share housing plan? If so, please state in the Comments section whether or not the fair share housing plan is on your municipality's website. If you did not answer Yes, please provide an explanation in the Comment Box.			[0.00] Yes Comment: A copy is on the Borough's website
080	Unscored Survey	Affordable Housing	
If your municipality has an affordable housing element and fair share housing plan, has the element and plan been approved by the Superior Court?			[0.00] Yes

081 Unscored Survey Affordable Housing

If you answered "Yes" to either of the above questions, fill in under Comments the number of affordable housing unit obligations for the following periods: Prior Round (1987-1999); Present Need (Rehabilitation Share); and Third Round (Prospective Need 1999-2025), as well as the number of units that have been constructed and are ready for occupancy that count toward the affordable housing obligations in your municipality's affordable housing element and fair share housing plan. If you did not answer yes to either question 80 or 81, please type "NA" into the Comment Box.

Comment: Prior round (1987-1999) Obligation (pursuant to N.J.A.C. 5:39) 80 units, Realistic Development Potential 18 units, Constructed 6 units and 12 units - RCA Orange NJ Rehabilitation Share (per Kinsey Report) 1 unit Third round (Prospective Need (1999-2025) Prospective Need (per Kinsey Report, as adjusted through this Agreement) Obligation 271 units, Realistic Development Potential 17 units, Constructed 8 units

082 Unscored Survey Affordable Housing

Does your municipality collect a non-residential development fee?

[0.00] Yes

083 Unscored Survey Affordable Housing

Does your municipality have a municipal housing liaison?

[0.00] No

084 Unscored Survey Affordable Housing

Does your municipality have an affordable housing trust fund?

[0.00] Yes

Return to Question List (../?id=7c13da05-bdd0-e911-a98b-001dd800a749)

Best Practices Inventory

Mountain Lakes Borough

Scoring

Current Score: 40.50

Score	Aid Withheld
30 +	No aid withholding
25 - 29	25% of final aid payment withheld
20 - 24	50% of final aid payment withheld
0 - 19	100% of final aid payment withheld

BOROUGH OF MOUNTAIN LAKES
MORRIS COUNTY, NEW JERSEY

ORDINANCE 12-19

ORDINANCE AMENDING CHAPTER 111 OF THE REVISED GENERAL ORDINANCES OF THE BOROUGH OF MOUNTAIN LAKES AND REVISING THE FEE SCHEDULE

BE IT ORDAINED by the Borough Council of the Borough of Mountain Lakes, in the County of Morris and State of New Jersey, as follows:

Section 1. Chapter 111 of the Revised General Ordinances of the Borough of Mountain Lakes, entitled "Fee Schedule", shall be amended as follows:

(4) Water rates

Water meters per 100 gallons			
	Residential:		
	Minimum Charge up to 11,968 gallons	~~$46.47~~	$47.86
	From 11,969 to 22,440 gallons	~~$0.4065~~	$0.4187
	From 22,441 to 37,400 gallons	~~$0.4180~~	$0.4305
	From 37,401 to 59,840 gallons	~~$0.4380~~	$0.4511
	From 59,841 to 74,800 gallons	~~$0.4544~~	$0.4680
	From 74,801 gallons and above	~~$0.4792~~	$0.4936
	Commercial / Industrial:		
	Minimum Charge up to 11,968 gallons	~~$49.43~~	$50.91
	From 11,969 to 22,440 gallons	~~$0.4494~~	$0.4628
	From 22,441 to 37,400 gallons	~~$0.4709~~	$0.4850
	From 37,401 to 59,840 gallons	~~$0.5288~~	$0.5446
	From 59,841 to 74,800 gallons	~~$0.5783~~	$0.5956
	From 74,801 gallons and above	~~$0.6279~~	$0.6467
Sprinkler meters per 100 gallons			
	Residential:		
	Minimum Charge up to 11,968 gallons	~~$59.31~~	$61.09
	From 11,969 to 22,440 gallons	~~$0.5850~~	$0.6025
	From 22,441 to 37,400 gallons	~~$0.6411~~	$0.6603
	From 37,401 to 59,840 gallons	~~$0.6874~~	$0.7080
	From 59,841 to 74,800 gallons	~~$0.8427~~	$0.8679
	From 74,801 gallons and above	~~$1.0840~~	$1.1165
	Commercial:		
	Minimum Charge up to 11,968 gallons	~~$64.27~~	$66.20
	From 11,969 to 22,440 gallons	~~$0.6262~~	$0.6449
	From 22,441 to 37,400 gallons	~~$0.6824~~	$0.7028
	From 37,401 to 59,840 gallons	~~$0.7304~~	$0.7523
	From 59,841 to 74,800 gallons	~~$0.8658~~	$0.8917
	From 74,801 gallons and above	~~$1.1236~~	$1.1573
Water meters per cubic feet			
	Residential:		
	Minimum Charge up to 1600 cubic feet	~~$46.47~~	$47.86

	From 1,601 to 3,000 cubic feet	~~$0.0304~~	$0.0313
	From 3,001 to 5,000 cubic feet	~~$0.0312~~	$0.0322
	From 5,001 to 8,000 cubic feet	~~$0.0327~~	$0.0337
	From 8,001 to 10,000 cubic feet	~~$0.0339~~	$0.0350
	From 10,001 cubic feet and above	~~$0.0358~~	$0.0369
	Commercial / Industrial		
	Minimum Charge up to 1600 cubic feet	~~$49.43~~	$50.91
	From 1,601 to 3,000 cubic feet	~~$0.0336~~	$0.0346
	From 3,001 to 5,000 cubic feet	~~$0.0352~~	$0.0362
	From 5,001 to 8,000 cubic feet	~~$0.0395~~	$0.0407
	From 8,001 to 10,000 cubic feet	~~$0.0432~~	$0.0445
	From 10,001 cubic feet and above	~~$0.0469~~	$0.0483
Sprinkler meters per cubic feet			
	Residential:		
	Minimum Charge up to 1600 cubic feet	~~$59.31~~	$61.09
	From 1,601 to 3,000 cubic feet	~~$0.0437~~	$0.0451
	From 3,001 to 5,000 cubic feet	~~$0.0479~~	$0.0494
	From 5,001 to 8,000 cubic feet	~~$0.0514~~	$0.0527
	From 8,001 to 10,000 cubic feet	~~$0.0630~~	$0.0649
	From 10,001 cubic feet and above	~~$0.0810~~	$0.0835
	Commercial		
	Up to 1600 cubic feet	~~$64.27~~	$66.20
	From 1,601 to 3,000 cubic feet	~~$0.0468~~	$0.0482
	From 3,001 to 5,000 cubic feet	~~$0.0510~~	$0.0526
	From 5,001 to 8,000 cubic feet	~~$0.0546~~	$0.0563
	From 8,001 to 10,000 cubic feet	~~$0.0647~~	$0.0667
	From 10,001 cubic feet and above	~~$0.0840~~	$0.0865

Section 2. If any section or provision of this Ordinance shall be held invalid in any Court of competent jurisdiction, the same shall not affect the other sections or provisions of this Ordinance, except so far as the section or provision so declared invalid shall be inseparable from the remainder or any portion thereof.

Section 3. All Ordinances or parts of Ordinances, which are inconsistent herewith, are hereby repealed to the extent of such inconsistency.

Section 4. This Ordinance shall take effect immediately after final passage and publication in the manner provided by law.

Marcy Gianattasio, Municipal Clerk

Lauren Barnett, Mayor

Introduced: September 23, 2019

Adopted:

Name	Motion	Second	Aye	Nay	Absent	Abstain	Motion	Second	Aye	Nay	Absent	Abstain
Happer					X							
Horst	X		X									
Korman			X									
Lane			X									
Menard			X									
Shepherd		X	X									
Barnett			X									

BOROUGH OF MOUNTAIN LAKES
MORRIS COUNTY, NEW JERSEY

ORDINANCE 13-19

"ORDINANCE AUTHORIZING THE SALARY AND/OR WAGES OF THE OFFICERS AND EMPLOYEES OF THE BOROUGH OF MOUNTAIN LAKES, COUNTY OF MORRIS, NEW JERSEY"

BE IT ORDAINED by the Borough Council of the Borough of Mountain Lakes, in the County of Morris and State of New Jersey, as follows:

Section 1. That the following position(s) be ADDED to the respective salary/wage ordinance at the following range:

Position	Minimum	Maximum
Construction/Tradesperson(s) for the Island Beach Project Temporary Position - Hourly	$20.00	$85.00

Section 3. The Borough Manager is authorized to prepare an annual salary resolution for consideration and approval by the Borough Council that shall set the salary/wage for all full-time, permanent part-time and temporary part-time employees of the Borough. The Borough Manager is authorized to set the hourly rate according to the salary range for all seasonal employees and to notify the Borough Council of such action.

Section 4. If any section or provision of this Ordinance shall be held invalid in any Court of competent jurisdiction, the same shall not affect the other sections or provisions of this Ordinance, except so far as the section or provision so declared invalid shall be inseparable from the remainder or any portion thereof.

Section 5. All Ordinances or parts of Ordinances, which are inconsistent herewith are hereby repealed to the extent of such inconsistency.

Section 6. This Ordinance shall take effect immediately after final passage and publication in the manner provided by law.

Marcy Gianattasio, Borough Clerk

Lauren Barnett, Mayor

Introduced: 9/23/2019

Adopted:

Name	Motion	Second	Aye	Nay	Absent	Abstain	Motion	Second	Aye	Nay	Absent	Abstain
Happer					X							
Horst			X									
Korman	X		X									
Lane			X									
Menard		X	X									
Shepherd			X									
Barnett			X									

BOROUGH OF MOUNTAIN LAKES
COUNTY OF MORRIS, NJ

RESOLUTION 139-19

"RESOLUTION AUTHORIZING THE PAYMENT OF BILLS"

WHEREAS, the Borough Manager has reviewed and approved purchase orders requested by the Department Heads; and
WHEREAS, the Finance Office has certified that funds are available in the proper account; and

WHEREAS, the Borough Treasurer has approved payment, upon certification from the Borough Department Heads that the goods and/or services have been rendered to the Borough.

NOW, THEREFORE, BE IT RESOLVED by the Borough Council of the Borough of Mountain Lakes, County of Morris, State of New Jersey, that the current bills, dated **October 14, 2019** and on file and available for public inspection in the Office of the Treasurer and approved by him for payment, be paid.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CERTIFICATION: I hereby certify the foregoing to be a true and correct copy of a resolution duly adopted by the Borough Council of Mountain Lakes, New Jersey, at a meeting held on October 14, 2019.

_____
Marcy Gianattasio, Municipal Clerk

Name	Motion	Second	Aye	Nay	Absent	Abstain
Happer						
Horst						
Korman						
Lane						
Menard						
Shepherd						
Barnett						

List of Bills - CLAIMS/CLEARING CHECKING ACCOUNT

Meeting Date: 10/14/2019 For bills from 09/19/2019 to 10/09/2019

Check#	Vendor	Description		Payment	Check Total
16302	124 - AC DAUGHTRY, INC.	PO 20875	DPW - CENTRAL STATION MONITORING -	164.70	
		PO 20875	DPW - CENTRAL STATION MONITORING -	60.00	224.70
16303	219 - ACCESS	PO 21038	CUST# 156NFY04790 - SEPT 2019	49.00	
		PO 21137	CUST# 156NFY04790 - OCT TO DEC 2019	1,303.04	1,352.04
16304	164 - ALERT-ALL CORP.	PO 21109	FIRE DEPT: FIRE PREVENTION/ SCHOOL	1,680.15	1,680.15
16305	3995 - ALL AMERICAN FORD	PO 21075	DPW - VEHICLE REPAIR ML1	468.15	468.15
16306	206 - ALLEN PAPER & SUPPLY CO.	PO 21045	DPW - DEPARTMENT SUPPLIES	241.15	241.15
16307	196 - ALLIED OIL	PO 21050	UNLEADED FUEL - BLANKET 2019	1,764.72	1,764.72
16308	189 - ANCHOR ACE HARDWARE	PO 21097	BORO HALL: SHELVES/MAINTENANCE - AC	55.78	55.78
16309	102 - ANDERSON & DENZLER ASSOC., INC	PO 21073	AUGUST 2019 PROFESSIONAL SERVICES	571.55	
		PO 21073	AUGUST 2019 PROFESSIONAL SERVICES	14,093.80	
		PO 21073	AUGUST 2019 PROFESSIONAL SERVICES	2,802.65	
16310	3571 - ANN PURCELL - PETTY CASH	PO 21078	AUGUST 2019 PROFESSIONAL SERVICES -	81.65	17,549.65
16311	2277 - STALKER RADAR	PO 21083	REPLENISH PETTY CASH	200.63	200.63
16312	3973 - ARCARI & IOVINO ARCHITECTS, PC	PO 21135	POLICE: VEHICLE REFITTING	94.00	94.00
16313	2686 - ATLANTIC TACTICAL OF NJ, INC.	PO 21028	PROJECT# 1943 ARCH. SERVICES - ISLA	10,925.00	10,925.00
16314	369 - B & R UNIFORMS	PO 19793	Police Dept. Supplies Quote #'s SQ-	654.86	654.86
16315	344 - BALLY'S ATLANTIC CITY	PO 21132	POLICE: ARM PATCHES	550.00	550.00
16316	3828 - BOROUGH OF MADISON	PO 21141	2019 League of Municpalites Hotel	685.00	685.00
		PO 21051	JULY 2019 IT SERVICES	703.80	
16317	450 - CAMPBELL FOUNDRY COMPANY	PO 21139	AUGUST 2019 IT SERVICES	989.40	1,693.20
16318	2775 - CAPITOL SUPPLY CONSTRUC PROD, INC	PO 20706	SEWER DEPARTMENT	1,212.00	1,212.00
16319	3411 - CENTRAL POLY-BAG CORP	PO 20883	WATER DEPARTMENT- EQUIPMENT & TOOLS	621.66	621.66
16320	545 - CERTIFIED SPEEDOMETER SVC., INC	PO 20963	CLEAN COMMUNITIES - SUPPLIES	1,304.00	1,304.00
16321	3783 - CINTAS CORPORATION #111	PO 19920	POLICE: VEHICLE CALIBRATION 2019 -	123.00	123.00
		PO 21092	DPW - UNIFORM RENTALS - AUGUST 2019	362.60	
		PO 21092	DPW - UNIFORM RENTALS - AUGUST 2019	112.96	
16322	653 - GANNET NEW JERSEY NEWSPAPERS	PO 21092	DPW - UNIFORM RENTALS - AUGUST 2019	225.28	700.84
16323	3884 - DECOTIIS, FITZPATRICK, COLE & GIBLI	PO 20791	CLERK - 2019 ADVERTISING ACCT#31471	109.56	109.56
16324	2079 - TREASURER, STATE OF NEW JERSEY	PO 21113	AUGUST 2019 PROFESSIONAL SERVICES	5,839.08	5,839.08
16325	652 - DOVER BRAKE AND CLUTCH CO. INC	PO 21120	JULY-SEPT 2019 MARRIAGE LICENSE FEE	225.00	225.00
16326	3367 - NEW JERSEY EZ PASS	PO 21002	DPW - VEHICLE REPAIR - BLANKET	107.50	107.50
16327	753 - FIRE FIGHTERS EQUIPMENT CO.	PO 19918	POLICE: TOLLS - 2019 BLANKET ACCT#	1.00	1.00
		PO 21021	FIRE DEPT: HYDRANT TOOL KIT	92.61	
16328	769 - FOREST LUMBER	PO 21031	FIRE DEPT: PERSONAL PROTECTIVE GEAR	175.00	267.61
		PO 19937	DPW - EQUIPMENT & TOOLS - BLANKET	114.95	
16329	2998 - FOX HOLLOW LANDSCAPING & DESIGN	PO 21091	BORO HALL - SHELVING	336.61	451.56
16330	814 - GARDEN STATE HIGHWAY PRODUCTS	PO 21052	PROPERTY CLEAN UP PER RESOLUTION	2,160.00	2,160.00
16331	2707 - GNOMECOMM, LLC	PO 21041	DPW - SIGNS	75.00	75.00
16332	3991 - GRM INFORMATION MANAGEMENT SERVICES	PO 21089	DPW - CAMERAS	315.00	315.00
16333	3827 - GROFF TRACTOR NEW JERSEY, LLC	PO 20574	2019 ARCHIVE STORAGE - BLANKET	65.00	65.00
16334	3306 - INTERSTATE BATTERY OF NJ DIST #4573	PO 21110	WATER DEPT - VEHICLE REPAIRS	296.80	296.80
		PO 20041	DPW - VEHICLE REPAIRS & MAINTENANCE	238.55	
16335	1030 - J. ECKERT LOCKSMITHS, INC	PO 20408	WATER DEPARTMENT - FACILITY MAINTEN	54.20	292.75
16336	859 - JCP&L	PO 21124	UNLOCK/KEYS FOR FILE CABIBET	115.00	115.00
		PO 21117	MASTER ACCT# 200 000 569 000 - 9/24	3,612.56	
16337	1040 - JESCO, INC.	PO 21116	ACCT#100 050 702 156 - BILL PRD: 8/	4.73	3,617.29
16338	1074 - JW PIERSON CO.	PO 21100	DPW- LOADER / BLANKET	423.52	423.52
16339	1090 - KENVIL POWER MOWER	PO 20836	DIESEL FUEL - BLANKET 2019 - ACCT #	2,830.84	2,830.84
16340	4066 - KEYTECH	PO 21047	DPW - EQUIPMENT REPAIR - BLANKET	399.67	399.67
16341	1363 - M.J. CORIGLIANO	PO 21080	NORTH POCONO RD. IMPROVEMENTS FILE#	1,400.00	1,400.00
16342	1441 - MAJOR POLICE SUPPLY	PO 21082	DPW - VEHICLE REPAIR	300.00	300.00
16343	3588 - MCELROY, DEUTSCH, MULVANEY & CARPEN	PO 20888	POLICE: VEHICLE REFITTING - QUOTE-	11,607.12	11,607.12
16344	1338 - MGL PRINTING SOLUTIONS, LLC	PO 21088	AUGUST 2019 PROFESSIONAL SERVICES -	560.00	560.00
		PO 20986	WATER/SEWER DEPARTMENT - SUPPLIES/F	470.00	
16345	3792 - MIKE FITZPATRICK & SON, INC	PO 20986	WATER/SEWER DEPARTMENT - SUPPLIES/F	470.00	940.00
16346	3886 - MISSION COMMUNICATIONS, LLC	PO 20583	MIDVALE ROAD IMPROVEMENT PROJECT: R	30,775.91	30,775.91
16347	3648 - MONMOUTH TELECOM	PO 21093	WATER DEPARTMENT - SERVICE CONTRACT	3,787.80	3,787.80
16348	2534 - MORRIS COUNTY OVERHEAD DOOR COMPANY	PO 20430	2019 TELEPHONE SERVICES / ACCT# 362	1,319.03	1,319.03
16349	1295 - MORRIS CTY MUNICIPAL UTILITIES	PO 21074	FIRE DEPT: EMERGENCY REPAIR	300.00	300.00
16350	1309 - MORRIS CTY TAX COLL/TREAS ASSN	PO 21090	SOLID WASTE DISPOSAL - AUGUST 2019	10,077.57	10,077.57
16351	1062 - MR. JOHN, INC	PO 20991	FINANCE - QUARTERLY MEETING	25.00	25.00
16352	3099 - MTN LAKES MEDICAL CENTER, LLC	PO 21101	SEPT - OCT 2019 - CUST ID# 014738	640.00	640.00
16353	1371 - MTN. LAKES BOARD OF EDUCATION	PO 20894	FIREFIGHTER PHYSICALS	320.00	320.00
16354	1472 - MURPHY, MCKEON P.C.	PO 21095	OCT 2019 MTN LAKES SCHOOL DISTRICT	1,782,856.50	1,782,856.50
		PO 20447	2019 RETAINER FEES - BLANKET	4,166.66	

List of Bills - CLAIMS/CLEARING CHECKING ACCOUNT

Meeting Date: 10/14/2019 For bills from 09/19/2019 to 10/09/2019

Check#	Vendor		Description		Payment	Check Total
		PO 21138	SEPTEMBER 2019 LEGAL SERVICES	1,770.00		
		PO 21138	SEPTEMBER 2019 LEGAL SERVICES	330.00	6,266.66
16355	881 - NCX	PO 19879	BLANKET: 2019 DNS HOSTING / ACCT# G	21.95	21.95
16356	1562 - NJLM	PO 20992	CLERK: SEMINAR	75.00	75.00
16357	1562 - NJLM	PO 21096	COUNCIL: 104th Annual League Confer	55.00	55.00
16358	3683 - NJMMA	PO 21122	NJMMA Annual Awards Luncheon-Mitche	45.00	45.00
16359	2595 - NORTH JERSEY MUNICIPAL EMPLOYEE	PO 21076	OCT 2019 DENTAL PREMIUMS - GROUP 16	3,005.00	3,005.00
16360	2676 - NORTH JERSEY COPY	PO 21048	DPW: Business Cards	83.00	83.00
16361	1754 - NORTHEAST COMMUNICATIONS, INC.	PO 21059	FIRE DEPT: PAGER REPAIRS/BATTERIES	321.00	321.00
16362	2727 - ONE CALL CONCEPTS, INC.	PO 20130	2019 JAN - DEC BLANKET / ACCT# 12-B	67.78	67.78
16363	2968 - OPTIMUM	PO 19899	2019 DPW INTERNET SERVICES ACCT# 07	123.05	123.05
16364	2968 - OPTIMUM	PO 19900	2019 DPW: ACCT# 07876-414565-01-0	11.74	11.74
16365	3173 - OPTIMUM	PO 20425	FIRE: ACCT# 07876-603439-01-8 CABLE	71.69	71.69
16366	479 - PARKER PUBLICATIONS	PO 21067	ACCT# 010902 - ZBOA/PLANNING BRD -	18.33	18.33
16367	3113 - PHILLIPS PREISS GRYGIEL LEHENY HUGH	PO 21087	AUGUST 2019 PROFESSIONAL SERVICES -	38.75	38.75
16368	3195 - POWER DMS	PO 21127	POLICE: 2019 ANNUAL POWERSUITE SUBS	4,120.75	4,120.75
16369	4070 - PREMIER CAR WASH COR	PO 20790	POLICE DEPARTMENT - 2019 CAR WASHES	72.00	72.00
16370	1822 - R.S. PHILLIPS STEEL, LLC	PO 20965	PARKS & BEACHES - GENERAL MAINTENAN	2,334.08	2,334.08
16371	3890 - RDC DESIGN GROUP, LLC	PO 21142	CONTRACT AGREEMENT - WEB MAINTENANC	3,060.00	3,060.00
16372	1734 - READYREFRESH BY NESTLE	PO 20687	ACCT# 0016496903 - BLANKET	99.56	99.56
16373	3990 - RICH TREE SERVICE, INC.	PO 20885	DPW - TREE REMOVAL	9,025.00	9,025.00
16374	2397 - ROCKAWAY AUTO RESOURCES, LLC	PO 19974	DPW - VEHICLE REPAIRS & MAINTENANCE	536.72	
		PO 19975	POLICE DEPARTMENT - VEHICLE REPAIR	331.61	868.33
16375	2397 - ROCKAWAY AUTO RESOURCES, LLC	PO 20966	DPW - VEHICLE MAINTENANCE & REPAIRS	945.58	
		PO 21144	POLICE DEPARTMENT - VEHICLE REPAIR	101.33	1,046.91
16376	417 - RON CARROLL	PO 21044	WATER DEPARTMENT - FEES/PERMITS/DUE	50.00	50.00
16377	3536 - RUTGERS CENTER FOR GOVT SERVICES	PO 20827	DPW - CPWM TRAINING & EDUCATION - J	2,274.00	2,274.00
16378	4025 - RUTGERS UNIVERSITY-NEWARL	PO 20231	POLICE: CPM PROGRAM FOR CHIEF BENNE	3,700.00	3,700.00
16379	285 - SHAWN BENNETT	PO 21133	POLICE: CERT FIRST AID TRAINIG	26.66	26.66
16380	1837 - SHERATON ATLANTIC CITY	PO 21106	2019 LEAGUE OF MUNICIPALITIES HOTEL	1,559.69	
		PO 21105	2019 LEAGUE OF MUNICIPALITIES HOTEL	425.31	1,985.00
16381	114 - SOLITUDE LAKE MANAGEMENT	PO 20440	2019 LAKE MANAGEMENT - BLANKET - CU	5,805.00	5,805.00
16382	2774 - STAPLES BUSINESS ADVANTAGE	PO 19919	POLICE: OFFICE SUPPLIES - 2019 BLAN	74.95	
		PO 20887	CLERK/TAX COLLECTOR: ORDER# 7222892	458.34	533.29
16383	2774 - STAPLES BUSINESS ADVANTAGE	PO 21032	ORDER# 7300573640	257.32	257.32
16384	1981 - SUBURBAN DISPOSAL, INC	PO 20481	SOLID WASTE/RECYCLING COLLECTION -	35,399.99	35,399.99
16385	1536 - TREAS, STATE OF NJ - D.O.H.	PO 21119	SEPT 2019 DOG LICENSING FEE	1.20	1.20
16386	2115 - U.S. DEPT. OF AGRICULTURE	PO 21143	APHIS - CUST# 6001777	324.41	324.41
16387	2536 - UNUM LIFE INSURANCE COMPANY	PO 20424	STD/LTD / LIFE INSURANCE - 2019 BLA	2,564.93	2,564.93
	TOTAL				1,988,354.02

Summary By Account

ACCOUNT	DESCRIPTION	CURRENT YR	APPROP. YEAR	NON-BUDGETARY	CREDIT
01-103-01-001-000	CASH - PETTY CASH			200.63	
01-201-20-100-020	GENERAL ADMIN - OTHER EXPENSE	5,416.11			
01-201-20-110-020	MAYOR & COUNCIL - OTHER EXP'S	1,189.39			
01-201-20-120-020	MUNICIPAL CLERK - OTHER EXP'S	1,052.76			
01-201-20-130-020	FINANCE - OTHER EXPENSES	170.56			
01-201-20-140-020	COMPUTER SERVICES	1,104.69			
01-201-20-145-020	TAX COLLECTOR - OTHER EXPENSES	15.44			
01-201-20-155-020	LEGAL SERVICES - OTHER EXPENSE	11,775.74			
01-201-20-165-020	ENGINEERING SERVICES	2,802.65			
01-201-21-180-020	PLANNING BOARD - OTHER EXPENSE	680.40			
01-201-21-185-020	BD OF ADJUST - OTHER EXPENSES	18.33			
01-201-23-220-020	GROUP INSURANCE PLANS-EMPLOYEE	5,569.93			
01-201-25-240-020	POLICE DEPT - OTHER EXPENSES	20,842.02			
01-201-25-252-020	EMERGENCY MGMT - OTHER EXPENSE	26.66			
01-201-25-255-020	FIRE DEPT - OTHER EXPENSES	2,660.45			
01-201-26-290-020	STREETS & ROADS - OTHER EXP.	10,227.68			
01-201-26-300-020	SHADE TREE COMMISSION - O/E	3,650.00			
01-201-26-305-020	SOLID WASTE - OTHER EXPENSES	45,168.59			
01-201-26-306-020	Recycling Tax	308.97			
01-201-26-310-020	BLDG & GROUNDS - MUNIC BLDG	3,066.95			

ACCOUNT	DESCRIPTION	CURRENT YR	APPROP. YEAR	NON-BUDGETARY	CREDIT
01-201-26-315-020	VEHICLE REPAIRS & MAINTENANCE	3,152.44			
01-201-27-335-020	ENVIRONMENTAL COMM - OTHER EXP	324.41			
01-201-28-375-020	MAINT OF PARKS (BEACHES/LAKES)	8,831.04			
01-201-31-435-020	ELECTRICITY - ALL DEPARTMENTS	4.73			
01-201-31-436-020	ELECTRICITY - STREET LIGHTING	3,612.56			
01-201-31-440-020	TELECOMMUNICATIONS	1,319.03			
01-201-31-447-020	PETROLEUM PRODUCTS	4,595.56			
01-203-25-240-020	(2018) POLICE DEPT - OTHER EXPENSES		654.86		
01-207-55-000-000	LOCAL SCHOOL TAXES PAYABLE			1,782,856.50	
01-260-05-100	DUE TO CLEARING			0.00	1,921,524.08
01-290-55-000-002	DUE TO NJ - MARRIAGE LIC. FEES			225.00	
TOTALS FOR	**Current Fund**	**137,587.09**	**654.86**	**1,783,282.13**	**1,921,524.08**
02-200-40-700-340	Clean Communities Grant			1,304.00	
02-260-05-100	DUE TO CLEARING			0.00	1,304.00
TOTALS FOR	**FEDERAL AND STATE GRANTS**	**0.00**	**0.00**	**1,304.00**	**1,304.00**
04-215-55-982-000	2016 CAPITAL ORDINANCE 06-16			10,925.00	
04-215-55-984-000	2018 CAPITAL ORDINANCE 4-18			3,936.60	
04-215-55-985-000	2019 CAPITAL ORDINANCE 2-19			31,847.41	
04-215-55-986-000	2019 CAPITAL ORDINANCE 10-19			10,485.70	
04-260-05-100	DUE TO CLEARING			0.00	57,194.71
TOTALS FOR	**General Capital**	**0.00**	**0.00**	**57,194.71**	**57,194.71**
05-201-55-520-520	Water Operating - Other Expenses	6,205.07			
05-260-05-100	DUE TO CLEARING			0.00	6,205.07
TOTALS FOR	**Water Operating**	**6,205.07**	**0.00**	**0.00**	**6,205.07**
07-201-55-520-520	Sewer Operating - Other Expenses	1,794.96			
07-260-05-100	DUE TO CLEARING			0.00	1,794.96
TOTALS FOR	**Sewer Operating**	**1,794.96**	**0.00**	**0.00**	**1,794.96**
13-260-05-100	DUE TO CLEARING			0.00	1.20
13-295-56-000-000	DOG LICENSE FEES-DUE STATE NJ			1.20	
TOTALS FOR	**Animal Trust**	**0.00**	**0.00**	**1.20**	**1.20**
20-260-05-100	Due to Clearing			0.00	330.00
20-300-60-000-000	RESERVE FOR AFFORDABLE HOUSING			330.00	
TOTALS FOR	**AFFORDABLE HOUSING**	**0.00**	**0.00**	**330.00**	**330.00**

Total to be paid from Fund 01 Current Fund	1,921,524.08
Total to be paid from Fund 02 FEDERAL AND STATE GRANTS	1,304.00
Total to be paid from Fund 04 General Capital	57,194.71
Total to be paid from Fund 05 Water Operating	6,205.07
Total to be paid from Fund 07 Sewer Operating	1,794.96
Total to be paid from Fund 13 Animal Trust	1.20
Total to be paid from Fund 20 AFFORDABLE HOUSING	330.00
	1,988,354.02

Checks Previously Disbursed

Summary By Account

ACCOUNT	DESCRIPTION		CURRENT YR	APPROP. YEAR	NON-BUDGETARY	CREDIT
16301	NJ MOTOR VEHICLE COMMISSION	manual ck PO# 21129	VEHICLE REGISTRATION: POLICE TAHOE		60.00	10/07/2019
219408	COUNTY OF MORRIS	ACH Pymts	ACH PAYMENT FOR PRIMARY MUNICIPAL		3,166.66	10/08/2019
219394	KANSAS STATE BANK		OCTOBER 1, 2019 - DPW TRUCK LEASE		690.00	10/01/2019
219393	FIRST DATA CORPORATION		CLOVER CC MACHINE MONTHLY CHARGES		45.83	9/05/2019
					3,962.49	

Totals by fund	Previous Checks/Voids	Current Payments	Total
Fund 01 Current Fund	3,962.49	1,921,524.08	**1,925,486.57**
Fund 02 FEDERAL AND STATE GRANTS		1,304.00	**1,304.00**
Fund 04 General Capital		57,194.71	**57,194.71**
Fund 05 Water Operating		6,205.07	**6,205.07**
Fund 07 Sewer Operating		1,794.96	**1,794.96**
Fund 13 Animal Trust		1.20	**1.20**
Fund 20 AFFORDABLE HOUSING		330.00	**330.00**
BILLS LIST TOTALS	3,962.49	1,988,354.02	**1,992,316.51**

List of Bills - (1210101001001) PAYROLL AGENCY-CASH-PROVIDENT BANK
Payroll Agency Account
Meeting Date: 10/14/2019 For bills from 09/19/2019 to 10/09/2019

Check#	Vendor	Description	Payment	Check Total
5025	1392 - MTN. LAKES POLICE ASSOCIATION	PO 21098 3RD QTR PBA DUES	780.00	780.00
	TOTAL			780.00

Summary By Account

ACCOUNT	DESCRIPTION	CURRENT YR	APPROP. YEAR	NON-BUDGETARY	CREDIT
12-101-01-001-001	PAYROLL AGENCY-CASH-PROVIDENT BANK			0.00	780.00
12-200-00-000-800	POLICE UNION DUES			780.00	
TOTALS FOR	Payroll Agency Account	0.00	0.00	780.00	780.00

Total to be paid from Fund 12 Payroll Agency Account 780.00

780.00

List of Bills - (1710101001002) Escrow - Developers - Checking
Developer's Escrow
Meeting Date: 10/14/2019 For bills from 09/19/2019 to 10/09/2019

Check#	Vendor		Description		Payment	Check Total
5163	102 - **ANDERSON & DENZLER ASSOC., INC**	PO 21079	AUGUST 2019 PROFESSIONAL SERVICES -		4,358.15	**4,358.15**
5164	4076 - **BOARDWALK BUILDERS, LLC**	PO 20896	ESCROW REFUND		292.80	**292.80**
5165	3515 - **DOLAN & DEAN CONSULTING ENGINEERS**	PO 21086	AUGUST 2019 PROFESSIONAL SERVICES -		672.50	**672.50**
	TOTAL					**5,323.45**

Summary By Account

ACCOUNT	DESCRIPTION	CURRENT YR	APPROP. YEAR	NON-BUDGETARY	CREDIT
17-101-01-001-002	Escrow - Developers - Checking			0.00	5,323.45
17-500-00-050-231	Sunrise Senior Living Management			3,040.35	
17-500-00-050-308	NEW LAND MT. LAKES - INSPECTION FEES			1,000.08	
17-500-00-091-300	BOARDWALK BUILDERS			292.80	
17-500-00-091-310	PULTE GROUP - ENCLAVE SITE INSPEC. FEE			990.22	
TOTALS FOR	**Developer's Escrow**	**0.00**	**0.00**	**5,323.45**	**5,323.45**

Total to be paid from Fund 17 Developer's Escrow 5,323.45

5,323.45

List of Bills - (3310101001001) CASH - RECREATION
Recreation Trust

Meeting Date: 10/14/2019 For bills from 09/19/2019 to 10/09/2019

Check#	Vendor	Description		Payment	Check Total
5319	1219 - **MFAC, LLC**	PO 20996	TRACK: CUSTOMIZED TENT - QUOTE	1,609.00	**1,609.00**
5320	3878 - **PAUL ZIMMERMAN FOUNDRIES**	PO 20973	HPC: HAPGOOD HOUSE #291	216.30	**216.30**
5321	3256 - **RANJAN O. BOSE**	PO 20999	REIMBURSEMENT	132.00	
		PO 21121	REIMBURSEMENT FOR 2019 TRACK	322.71	**454.71**
	TOTAL				**2,280.01**

Summary By Account

ACCOUNT	DESCRIPTION	CURRENT YR	APPROP. YEAR	NON-BUDGETARY	CREDIT
33-101-01-001-001	CASH - RECREATION			0.00	2,280.01
33-600-00-090-000	Recreation Trust Reserves			2,280.01	
TOTALS FOR	**Recreation Trust**	0.00	0.00	2,280.01	**2,280.01**

Total to be paid from Fund 33 Recreation Trust 2,280.01

2,280.01

BOROUGH OF MOUNTAIN LAKES
COUNTY OF MORRIS

RESOLUTION 140-19

RESOLUTION CONFIRMING THE TERM OF APPOINTMENT OF MONICA GOSCICKI AS CHIEF FINANCIAL OFFICER

WHEREAS, N.J.S.A. 40A:9-140.10 provides that in every municipality there shall be a chief financial officer appointed by the governing body for a term of four years beginning on January 1 of the year in which they are appointed; and

WHEREAS, N.J.S.A. 40A:9-140.13 requires that a person appointed chief financial officer of a municipality hold a municipal finance officer certification issued by the State of New Jersey; and

WHEREAS, Monica Goscicki, who holds a certification, was appointed Chief Financial Officer for the Borough of Mountain Lakes on June 13, 2016 and at that time was appointed to replace Bernard Re who had resigned after being appointed to a term expiring on December 31, 2018; and

WHEREAS, N.J.S.A. 40A:9-12.1 provides that appointments as a result of such vacancies of office are to filled for the expiration of the existing term; and

WHEREAS, consequently Ms. Goscicki's term of office expired on December 31, 2018 although she has continued to serve in the position of Chief Financial Officer; and

WHEREAS, The Borough Council desires to confirm the reappointment of Ms. Goscicki as Chief Financial Officer for a four-year term that commenced on January 1, 2019 and will expire on December 31, 2022.

NOW, THEREFORE, BE IT RESOLVED by the Borough Council of the Borough of Mountain Lakes, in the County of Morris and State of New Jersey, that Monica Goscicki is hereby reappointed Chief Financial officer of the Borough of Mountain Lakes for a term commencing on January 1, 2019 and ending December 31, 2022.

Council Member	By:	2nd	Yes	No	Abstain	Absent
Happer						
Horst						
Korman						
Lane						
Menard						
Shepherd						
Barnett						

I, Marcy Gianattasio, RMC, Borough Clerk of the Borough of Mountain Lakes, in the County of Morris, in the State of New Jersey, certify this to be a true copy of the Resolution adopted at the regularly scheduled session of the Borough Council held on October 14, 2019.

_____

BOROUGH OF MOUNTAIN LAKES
MORRIS COUNTY, NEW JERSEY

RESOLUTION R142-19

Change of Procedure for Claimant Certification

WHEREAS, N.J.A.C. 5:30-9A.6 and 5:31-4.1 now allows a local unit to enact a standard policy through resolution, to not require claimant certification where the vendor or claimant does not provide such certification as part of its normal course of business.

WHEREAS, the Borough of Mountain Lakes has elected to waive the claimant certification on all transactions except for the following:

- Transactions above the dollar threshold of $5,000
- Reimbursement to Township Employees
- Sole Proprietors
- Deposits in advance of work preformed

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and Council of the Borough of Mountain Lakes, County of Morris, and State of New Jersey that Claimant Certification be waived on Township Purchase Orders with the exceptions noted above.

CERTIFICATION: I hereby certify the foregoing to be a true and correct copy of a resolution duly adopted by the Borough Council of Mountain Lakes, New Jersey, at a meeting held on October 14, 2019.

_____

Marcy Gianattasio, Municipal Clerk

Name	Motion	Second	Aye	Nay	Absent	Abstain
Happer						
Horst						
Korman						
Lane						
Menard						
Shepherd						
Barnett						

BOROUGH OF MOUNTAIN LAKES
COUNTY OF MORRIS, NJ

RESOLUTION R143-19

RESOLUTION TO AUTHORIZE THE ESTABLISHMENT OF A "DEDICATION BY RIDER" TO THE BUDGET OF THE BOROUGH OF MOUNTAIN LAKES FOR ELECTRONIC RECEIPT FEES

WHEREAS, N.J.S.A. 40A:4-39 provides for the insertions of a "Dedication by Rider" in the budget of any local unit which dedicates revenues anticipated during the fiscal year from revenues, subject to written prior consent of the Director of the Division of Local Government Services, when the revenue is not subject to reasonably accurate estimate in advance; and

WHEREAS, under N.J.C.A. 5:30-9.9 provides for surcharges or convenience fees assessed by the municipality for electronic payments; and

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and Council of the Borough of Mountain Lakes that all revenue received by the Borough of Mountain Lakes be placed in a specific trust fund and such trust fund shall be considered a "Dedication by Rider" to the budget of the local unit, pursuant to N.J.C.A. 5:30-9.9, for the sole purpose stated above.

CERTIFICATION: I hereby certify the foregoing to be a true and correct copy of a resolution duly adopted by the Borough Council of Mountain Lakes, New Jersey, at a meeting held on October 14, 2019

_____
Marcy Gianattasio, Municipal Clerk

Name	Motion	Second	Aye	Nay	Absent	Abstain
Happer						
Horst						
Korman						
Lane						
Menard						
Shepherd						
Barnett						

BOROUGH OF MOUNTAIN LAKES
COUNTY OF MORRIS, NJ

RESOLUTION 144-19

"RESOLUTION AUTHORIZING 2019 MUNICIPAL EMPLOYEES' SALARY"

WHEREAS, the Borough Council adopted Ordinance #13-19 setting the salary ranges for various Borough positions; and

WHEREAS, the Borough Council of the Borough of Mountain Lakes desires to set the specific salaries for full-time and permanent part-time non-contract Borough employees for the year **2019**.

NOW, THEREFORE, BE IT RESOLVED that the following salaries are effective **October 14, 2019,** and are to be pro-rated where specific dates are indicated:

BE IT FURTHER RESOLVED that the Borough Manager is authorized to set the salary level according to the salary ranges in Ordinance #13-19 for all non-permanent part-time and seasonal employees.

TITLE	***2018***	***2019***	***$ CHANGE***
Construction/Tradesperson(s) for the Island Beach Project Temporary Position - Hourly	N/A	$20.00 to $85.00	N/A

ℵℵ

CERTIFICATION: I hereby certify the foregoing to be a true and correct copy of a resolution duly adopted by the Borough Council of Mountain Lakes, New Jersey, at a meeting held on October 14, 2019.

____
Marcy Gianattasio, Municipal Clerk

Name	Motion	Second	Aye	Nay	Absent	Abstain
Happer						
Horst						
Korman						
Lane						
Menard						
Shepherd						
Barnett						

MEETING MINUTES OF THE COUNCIL OF THE BOROUGH OF MOUNTAIN LAKES
SEPTEMBER 23, 2019
HELD AT BOROUGH HALL, 400 BOULEVARD, MOUNTAIN LAKES, NJ 07046

CALL TO ORDER AND OPEN PUBLIC MEETINGS ACT STATEMENT

This meeting is being held in compliance with Public Law 1975, Chapter 231, Sections 4 and 13, as notice of this meeting and the agenda thereof had been reported to The Citizen and the Morris County Daily Record and The Star Ledger on January 9, 2019 and posted in the municipal building.

Mayor Barnett called the meeting to order at 7:30 p.m. in the municipal building.

ROLL CALL ATTENDANCE

Roll Call	Present	Absent
Happer	☐	☒
Horst	☒	☐
Korman	☐	☒
Lane	☒	☐
Menard	☒	☐
Shepherd	☒	☐
Barnett	☒	☐

FLAG

Mayor Barnett led the salute to the flag.

Council Member Korman entered the meeting at 7:34 p.m.

Mayor Barnett asked that everyone take a moment to reflect on the passing of State Senator Tony Bucco. Mayor Barnett said that Senator Bucco was a dedicated public servant. He had decades of service as a Mayor and Alderman in Boonton, as an Assemblyman, as a Freeholder and as our State Senator. We are grateful for his service to the citizens of Mountain Lakes, Morris County and to the entire State of New Jersey. We offer our deepest sympathies to the family of State Senator Bucco, including his son our Assemblyman Tony Bucco. The Mayor asked if everyone would join the Borough Council for a moment of silence for our State Senator.

Mayor Barnett said that there will be a celebration of Senator Bucco's life on Sunday, October 6th at 2:00 p.m. at the County College of Morris. Council Member Korman added that in lieu of flowers, donations can be made to Boonton Kiwanis Ambulance Squad and the address to send this will be on the Borough's website.

COMMUNITY ANNOUNCEMENTS

Mayor Barnett announced that the Garden Club of Mountain Lakes will be hosting a floral design demonstration and luncheon this Wednesday, September 25th. The Garden Club will also be having a prospective member Tea on October 3rd.

The Town Club of Mountain Lakes is having a newcomer's cocktail party this Friday, September 27th. Information for all of these events can be found on the Borough's website.

The Mountain Lakes Police Department and the Mountain Lakes Community Emergency Response Team is conducting First Aid Training on Sunday, September 29th at Borough Hall. There is information on the website about registration for this.

Mayor Barnett announced that the Medical Needs 5K will be held at 9:00 a.m. Saturday, October 5th. Information for this can be found on the Borough's website.

The Lake Drive School will be celebrating their 50th Anniversary on October 8th. This is a very exciting milestone.

On Tuesday, October 8th at the Mountain Lakes High School there will be a public forum on the environmental factors that cause harmful algae blooms in New Jersey. There will be experts there to talk about strategies to mitigate future blooms that affect our lakes and reservoirs. This event is being sponsored by a number of groups including Mountain Lakes Lakes Management Committee and the Mountain Lakes Environmental Commission.

Council Member Lane announced that "The Herd", the Mountain Lakes Football Team, is holding a Helping Hands event on Saturday, October 12th from 9:00 a.m. to 12:00 p.m. This is a free community service to all senior citizens in the Borough. Team members will be available to perform chores around the house, including moving boxes, taking trash and recycling to the DPW, changing lightbulbs, raking, sweeping, moving flower pots, etc. Please contact Council Member Audrey Lane at audreylane@optonline.net or call her at 973-299-1247.

Council Member Horst announced that October 19th is Trash Day

Council Member Horst wanted to mention the Garden Club, which she is a member of. She said that the Garden Club takes care if nine community gardens around town, one right at Borough Hall. The Garden Club also runs a Junior Nature Program, and one half of the third-grade class tries to sign up for this program. The Garden Club only accepts twenty members. This shows what great volunteers we have in Mountain Lakes.

PUBLIC COMMENT
Please state your name and address for the record. Each speaker is limited to one (1) comment of no more than five (5) minutes and no yielding of time to another person.

Mayor Barnett opened the meeting to the public

Ted L'Estrange – 43 Prospect Hill Road, Cuddlebackville, NY, he asked the Borough Council to support a motion calling for an end to the violent persecution and state- sanctioned killing of Falon Gong practices and other prisoners of conscience in China for their organs. Mr. L'Estrange provided the Mayor and the Borough Council a packet of information on this topic.

BOROUGH COUNCIL DISCUSSION ITEMS
Economic Development Advisory Committee - East-Bound Route 46 Ordinance Update

Deputy Mayor Shepherd explained that following the Borough Council meeting on June 24, 2019, the Economic Development Committee contacted the chairpersons from the Historical Preservation Committee, the Economic Development Committee, the Environmental Commission, the Zoning Board and the Planning Board to seek volunteers to form an ad hoc committee that will assist with the Route 46 Zoning review. The Ad hoc committee discussed the current zoning and permitted uses on Eastbound Route 46.

Deputy Mayor Shepherd presented a draft red line ordinance of Business Zone B to the Borough Council. The Economic Development Committee will forward the draft red line version of the ordinance to the Borough Attorney and Borough Planner for review. After the draft ordinance is reviewed by the Borough Attorney and Planner, the draft ordinance will then be forwarded to the Planning Board for review and determination of consistency with the Borough's Master Plan. Finally, the Planning Board will provide any recommendations to the Borough Council.

ATTORNEY'S REPORT

Attorney Robert Oostdyk reported that the Borough has to finish up the fee ordinance for the Fair Share Housing. He was asked to remind the Borough Council that this still needs to be done. Attorney Oostdyk and Manager Stern need to follow up with the Construction Official to determine if a fee should be collected for renovations as well as new construction. This will be an item for discussion at a future meeting.

MANAGER'S REPORT

a. Beach Project-Island Beach

Manager Mitchell Stern reported that during a previous Borough Council meeting, there was support for determining the location of the swing set at Island Beach prior to the start of construction. After viewing the mark-outs and providing input, the Public Works Committee feels the best place to place the swings is a location opposite the new building. This location will afford the ability to have the swings in one of two directions, either facing south or facing east. As site work begins and the old structure is removed, a final decision will be made.

b. Salary Ordinance Amendment

Manager Stern reported that on the agenda tonight is a salary ordinance amendment that will allow for the hiring of temporary employees for the Island Beach project. The amendment, along with a resolution that will be on the October 14th agenda, is required to be able to pay temporary employees.

c. Trash Day

Manager Stern reported that Saturday October 19th, 8:00 a.m. to 3:00 p.m. has been set for the Borough's annual trash day. More information about this can be found on the Borough's website.

d. Water Rate Ordinance

As Manager Stern reported at a previous Borough Council meeting, the need for a water rate increase is necessary. On the agenda tonight there is an ordinance for introduction that will authorize the fee increase.

e. DPW Administrative Assistant

Manger Stern reported that after being notified by our DPW Administrative Assistant that she would be leaving her position, an advertisement for the position was placed, resumes accepted and interviews conducted. Mr. Stern is pleased to announce the hiring of Anne Stusnick as our new DPW Administrative Assistant / Utility Clerk. Anne has extensive experience with customer service, office administration and accounting. Anne will be joining Mountain lakes full-time on October 7th.

f. Surplus Property Resolution

Manager Stern reported that on the agenda tonight is a resolution authorizing the online public auction of surplus property and equipment. This resolution identifies miscellaneous watercrafts removed from Borough boat racks in December 2018, as well as several pieces of miscellaneous equipment located in the DPW garage that is no longer needed. Prior to the start of the auction, there will be an announcement of the auction on the Borough's weekly e-blast.

ORDINANCES TO INTRODUCE

a. Ordinance 12-19, Ordinance Amending Chapter 111 of the Revised General Ordinances of the Borough of Mountain Lakes and Revising the Fee Schedule

Council member	M	2nd	Yes	No	Abstain	Absent
Happer	☐	☐	☐	☐	☐	☒
Horst	☒	☐	☒	☐	☐	☐
Korman	☐	☐	☒	☐	☐	☐
Lane	☐	☐	☒	☐	☐	☐
Menard	☐	☐	☒	☐	☐	☐
Shepherd	☐	☒	☒	☐	☐	☐
Barnett	☐	☐	☒	☐	☐	☐

b. Ordinance 13-19, Ordinance Authorizing the Salary and/or Wages of the Officers and Employees of the Borough of Mountain Lakes, County of Morris, New Jersey

Council member	M	2nd	Yes	No	Abstain	Absent
Happer	☐	☐	☐	☐	☐	☒
Horst	☐	☐	☒	☐	☐	☐
Korman	☒	☐	☒	☐	☐	☐
Lane	☐	☐	☒	☐	☐	☐
Menard	☐	☒	☒	☐	☐	☐

Shepherd	☐	☐	☒	☐	☐	☐
Barnett	☐	☐	☒	☐	☐	☐

***CONSENT AGENDA ITEMS**

Matters listed as Consent Agenda Items are considered routine and will be enacted by one motion of the Council and one roll call vote. There will be no separate discussion of these items unless a Council member requests an item be removed for consideration.

***RESOLUTIONS**

a. *R136-19 Resolution Authorizing the Payment of Bills*
b. *R137-19 Resolution Authorizing Membership in the Mountain Lakes Volunteer Fire Department*
c. *R138-19 A Resolution Authorizing the Sale of Surplus Personal Property No Longer Needed for Public Use on an Online Auction Website*

***APPROVAL OF MINUTES**

9/9/2019 (Regular)

***APPROVAL OF REPORTS FOR FILING** *(reports are included only if checked)*

☒ Construction Department
☒ Department of Public Works
☒ Fire Department
☒ Health Department
☒ Police Department
☒ Recreation Department
☒ Code Enforcement/Property Maintenance

***Approval of the Consent Agenda**

Council member	M	2nd	Yes	No	Abstain	Absent
Happer	☐	☐	☐	☐	☐	☒
Horst	☐	☒	☒	☐	☐	☐
Korman	☐	☐	☒	☐	☐	☐
Lane	☒	☐	☒	☐	☐	☐
Menard	☐	☐	☒	☐	☐	☐
Shepherd	☐	☐	☒	☐	☐	☐
Barnett	☐	☐	☒	☐	☐	☐

COUNCIL REPORTS

Council Member Korman reported that Affordable Housing is working with their professionals on the Accessory Apartment Program.

Council Member Lane reported that the Zoning Board approved two applications. Council Member Lane contacted the Zoning Board Administrator about the tennis courts and she was told that there was not an application submitted to change the usage to the tennis courts since it is the same recreational use by the new owner.

Council Member Lane reported that the Board of Education is forming four ad hoc committees to discuss issues such as curriculum and programs the need immediate attention. Construction updates have been regularly provided by the Acting Superintendent of Schools. Any other needed updates can be provided by contacting the Board of Education. The hiring of an Assistant Superintendent will be discussed at the next Board of Education meeting. Council Member Lane said that back to school nights at the high school and the Wildwood School were very well attended. The Briarcliff School and the

Lake Drive School have their Back to School nights this week. Lastly, the NJSLA scores were released last week.

Council Member Lane reported that the Environmental Commission discussed the plans for the Island Beach project. The Environmental Commission had a discussion about the potential irrigation well at the Sunrise Development. They would like to see what the NJ DEP's rules are for irrigation wells and they would also like to review Mountain Lakes' ordinance on installing wells. Council Member Lane said that the Environmental Commission is reviewing plastic bag ordinances from other towns. This is a very popular topic and the Environmental Commission will be starting to consider a plastic bag ordinance for discussion.

Deputy Mayor Shepherd reported that the Historic Preservation Committee would like to present the historic preservation ordinance to the Borough Council again. The Historic Preservation Committee gathered all of the input from the Borough Council and they feel that their package is much more educational. They have not spoken to property owners to gather their input and concerns. They will be doing that before bringing the ordinance before the Borough Council again for discussion.

Council Member Horst reported that the Woodlands Advisory Committee voted to have two high school representatives join as student members for the 2019-2020 year, a returning member Natalie Blaney and a new member Lauren Sherman. The Woodlands Advisory Committee would like to get together with Doug Edler, the new DPW Supervisor, to talk about trail maintenance and have some weed whacking done on the trails. There is also an effort to have some local residents spear-head a few pocket park clean-ups.

Council Member Menard reported that the Recreation Commission met. The summer camp numbers were great and increased from last year. There is going to be a minimum wage increase for the Camp Counselors next year. Because of this the Recreation Commission feels that the lifeguards should also get a pay increase. To pay for this increase, the Recreation Commission discussed raising the cost of boat racks and rings. They feel that beach tags are already a high price. Council Member Menard said the Recreation Commission discussed the issue of multiple boats being used on one rack. The suggestion is to build additional racks for smaller kayaks as well as paddleboard racks.

Council Member Menard reported that the Recreation Commission also discussed triathlon swimmers who are using the Borough's lakes regularly and they are not residents. The Recreation Commission requested that the facilities at Birchwood Beach be winterized and locked up since the season is over to prevent unpleasant uses of the facilities. Council Member Menard asked if there was ever a consideration to issue permits to allow alcohol on the beach. He also reported that the key fob at the tennis courts is not working properly and he asked if this was expensive to service.

Council Member Korman reported that the Health Commission has a sub-committee that is doing a lot with mental health and they would like to interact with the schools on this issue.

Council Member Korman reported that the Shared Services Committee had an excellent meeting with the State Shared Services Czars, Nicolas Platt and Jordon Glatt. Three members of the Governor's Office of the Department of Consumer Affairs also attended the meeting.

Mayor Barnett reported that the Borough had their Shared Services meeting with the Board of Education and the meeting went very well. There is a huge cleanup effort going on at the DPW. At the meeting they discussed the Wildwood School traffic safety issue. A recommendation for the traffic safety issue is to have some public forums to educate the public.

PUBLIC COMMENT

Please state your name and address for the record. Each speaker is limited to one (1) comment of no more than five (5) minutes and no yielding of time to another person.

Mayor Barnett opened the meeting to the public.

Andrew Sadowski – 29 High View Rd, Parsippany, he said that a lot of work was done by the Economic Development Committee. Prior to going forward with the Route 46 zoning ordinance, he asks that the Borough Council consider Rainbow Lakes and how the residents there will be affected by a Wawa because of the property on Fox Hill Road and Route 46. Mr. Sadowski said he knows that the developer has done a lot of work already through the State. He feels that the updated zoning ordinance will make it easier for a gas station and hotel to be built.

Deputy Mayor Shepherd told Mr. Sadowski that there was not a proposal for a Wawa yet. Attorney Oostdyk said there will opportunities for public hearing at the Planning Board if and when an application comes into the Borough. Mayor Barnett said the Borough is very sensitive to the needs and concerns of their neighbors.

NEXT STEPS AND PRIORITIES
Mayor Barnett reviewed the following next steps and priorities:

Next Step	Completed by	Completion date
Senator Bucco	Manager Stern	
Racket Club	Manager Stern	
Cost Analysis for the Affordable Housing	Construction Official	
Plans for Island Beach to the Sailing Club	Manager Stern	
Have Lot and Block Numbers and Address on the eblast for Planning Board	Manager Stern	
Red Line Shade Tree Ordinance	Manager Stern	
Auctioned Boats and Equipment	Manager Stern	
Discuss Fees for Beach Tags or Racks and Rings	Council	
False Alarm Fees	Council	
Historic Preservation to touch base with property owners	Historic Preservation Committee	

ADJOURNMENT at 9:35 P.M.
Motion made by Deputy Mayor Shepherd, second by Council Member Korman to adjourn the meeting at 9:35 p.m., with all members in favor signifying by "Aye".

Respectfully Submitted

_____
Marcy Gianattasio, Borough Clerk

Lucas A. Stelling – Short Bio

I would like to be considered for membership on the shade-tree commission. I am currently a proud resident of Mountain Lakes. My wife, Adrienne Cook, and I moved here in 2013. We enjoy taking walks and hikes in town under the large established trees. Although my wife and I love abundant shade provided by the town's shade trees, I am also interested in cultivating fruit bearing trees. I planted a Montmorency sour-cherry tree in our yard. And, at our previous home in Alexandria, Virginia I planted a fig tree, a cherry tree, and a prune-plum tree.

I am also interested in volunteering locally. I am a trained Morris County poll worker and served on the local board of elections for Mountain Lakes, District 4 in the 2018 general election. Serving on the shade tree commission would provide me another opportunity to give back to the community.

Re: Application to participate in the Mountain Lakes "Green Team" Committee
October 7, 2019

Dear Ms. Gianattasio: I previously forwarded an email expressing interest in becoming involved in Mountain Lakes' environmental initiative. You were kind enough to forward that to Mayor Barnett and I was able to meet with several Green Team members. That meeting has encouraged me to officially put my name forward to become a part of the team- an amazing group I'd be proud to be a member of and look forward to contributing to.

Below is my resume outlining my background. Please let me know if there is anything additional you need.
Vicki

Vicki J. Maniatis
21 Crestwood Drive
Mountain Lakes, NJ 07046
[redacted]
nylawdog@gmail.com

Education:
Pennsylvania State University, B.A. 1990
Hofstra Law School, J.D. 1993

Practice Areas:
Pharmaceutical & Medical Devices
Mass Torts
Sexual Assault
Environmental

Bar Admissions:
New Jersey 1994
New York 1994

Office: Sanders Phillips Grossman, LLC
One Penn Plaza, New York, NY - Mountain Lakes, New Jersey

Vicki J. Maniatis, *Partner, Sanders Phillips Grossman, LLC,* resides in Mountain Lakes, New Jersey with her Son Alex, a Freshman in Mountain Lakes High School. After graduating from High School in Somerset County, New Jersey, Vicki studied a Pre-law curriculum at The Pennsylvania State University, earning her B.A. in 1990, followed by her J.D. from Hofstra University School of Law in 1993. She is admitted to practice law in New Jersey and New York since 1994. During law school, Ms. Maniatis interned for two summers with the Middlesex County Prosecutor's office. Once admitted, she started

practicing as a general negligence defense attorney practicing in numerous New Jersey Counties, including Bergen, Essex, Middlesex, Morris and Passaic, before transitioning into the field of Plaintiffs' Mass Tort in 1998 at Kreindler & Kreindler litigating Aviation disasters. She was also a Mass Tort attorney for six years at Weitz & Luxenberg. Currently she is a partner at Sanders Phillips Grossman where she works on mass tort cases involving pharmaceuticals and medical devices, the field she has worked in for seventeen years, as well as environmental cases. She is a frequent invited lecturer and moderator on a wide variety of pharmaceutical and mass tort cases including, Opioids, Trans Vaginal Mesh, Fosamax, Ortho Evra, Risperdal, Propecia, Avandia, Onglyza, as well as several medical devices. She has also published articles on pharmaceuticals and vaccines. She currently serves on her firm's Opioids Task Force educating lawyers and municipalities about the epidemic, as well as the firm's Environmental team, where Sanders Phillips Grossman is pursuing various environmental causes of action under investigation and pending appointment and/or litigation in New Jersey, New York and Puerto Rico. Ms. Maniatis has been appointed by State and Federal Judges to serve as lead counsel and on Plaintiffs' steering committees. She currently acts as lead counsel in the New Jersey Propecia Multi County Litigation. She also serves on the Fosamax Femur PSC (DNJ), the Transvaginal Mesh MDL PSC's in the Bard, Boston Scientific, American Medical Systems and Ethicon cases (DWV), the Benicar MDL PSC (DNJ) as well as the Talcum Powder MDL PSC (DNJ). Vicki has also regularly performs common benefit work outside her PSC appointments. Vicki performs all levels of bellwether trial case specific work up including, plaintiff, spouse and family member depositions, implanting, explanting, treating physicians, sales representative and expert depositions, for over 30 cases in several mass torts including TVM, Mirena and Propecia cases. Vicki has taken part in researching, meeting, retaining, working with experts for depositions and all levels of preparation in several litigations. Vicki has participated in focus group/mock trial scenarios for medical malpractice, aviation disasters, and pharmaceutical cases. She has presented as counsel and witnesses for Plaintiff and defense in Mock trials, and focus groups. Vicki has been recognized as a Top Attorney of the NY Metro Area and Top Woman Attorney in the NY Metro Area (2013 to date). She is an active participant in the American Association for Justice (AAJ), New Jersey Association for Justice and New York State Trial Lawyers Association (NYSTLA). Ms. Maniatis serves as a founding member of Mass Tort Med School, an annual medical seminar for Plaintiffs' attorneys that offers numerous physician speakers and cutting edge medical issues. She previously served as a committee co-chair for the Women En Mass group. Ms. Maniatis is an active runner and triathlete having completed Marathons, half iron and full Ironman races. She also serves as an Advisory Council Member to the Academy for Biotechnology of the Morris County Vocational School District and Mountain Lakes High School.