



**AGENDA**  
**Regular Town Council meeting reconvened from 12/10/2019**  
**Tuesday, October 1, 2019**  
**Council Chambers 3:00 PM**

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# MINUTES

## Regular Town Council Meeting

4:00 PM - Tuesday, September 10, 2019  
Council Chambers

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The Regular Town Council of the Town of Beech Mountain was called to order on Tuesday, September 10, 2019, at 4:00 PM, in the Council Chambers, with the following members present:

**COUNCIL PRESENT:** Mayor Renee Castiglione  
Vice-Mayor Barry Kaufman  
Councilman Carl Marquardt  
Councilman Weidner Abernethy  
Councilman Wendel Sauer

**COUNCIL EXCUSED:**

**STAFF PRESENT:** Town Manager Tim Holloman  
Attorney Stacy Eggers, IV  
Town Clerk Tamara Mercer  
Fire Chief Bob Pudney  
Public Utilities Superintendent Daniel Davis  
Director of Tourism and Economic Development Kate Gavenus  
Assistant Parks and Rec Director Kate Prisco  
Public Works Superintendent Matthew Clawson  
Town Planner Preston Yates  
Police Captain Renee Carpenter  
Director of Infrastructure Robert Heaton

### 1. CALL TO ORDER

### 2. ADOPTION OF AGENDA

- 2.1. Mayor Castiglione noted the removal of an item under Old Business, the Public Works New Facility Contractor Bids, as that topic will be addressed at the Special Called Meeting of Council on September 18, 2019 at 3:15 p.m. and she called for a motion to adopt the amended agenda.

#### **Motion**

Wendel Sauer made a motion to adopt the amended agenda and Barry Kaufman seconded the motion. CARRIED. unanimously.

### **3. INVOCATION**

### **4. PLEDGE OF ALLEGIANCE**

### **5. PUBLIC COMMENT**

5.1. Mr. Page Leidy of 503 Oz Road commented on the successful weekends at Autumn at Oz, he explained the scheduling and setup. Mr. Leidy thanked the Fire and Police Departments for coordinating with Land of Oz. He thanked Town Staff, Council and the various local businesses who helped with the event. Mr. Leidy extended VIP tickets to anyone who wished to attend the event for Friday, September 13th and gave passes to citizens after the meeting.

5.2. Mr. Joe Gregory of 134 Hawthorne Road said he is in favor of the speed limit reduction on his gravel road. Hawthorne Road is a main through-fair which people use to get to Beech Mountain Club. There have been attempts to pave it, but it is still gravel. He said the FedEx trucks speed on the road, and he asked Council to reduce the speed limit to 15 mph as dust and dirt are a nuisance and it is not safe.

5.3. Mr. Jeff Fabri of 113 Black Birch Lane said he was in strong favor of the 15-mph reduction to the speed limit on all Beech Mountain gravel roads. Mr. Fabri reviewed his history and said he is a professor emeritus physician as well as an engineer with a PhD in Quality and Safety Engineering and specifically taught safety during his career tenure at American College of Surgeons. He said the problem is a safety issue due to hazardous conditions and the rates of speed driving fast on gravel roads throughout the town. When an individual is walking on a paved road, they walk on the side of a road, but when traveling as a pedestrian on a gravel road, they walk in center of a gravel road, therefore; Mr. Fabri said it is a safety hazard.

Mr. Fabri explained the rate of travel and stopping distances on dry pavement versus the rate of a stopping distance when a vehicle is on a gravel road and the rate is double the distance on a gravel road. When there is ice and snow it is worse, and the gravel roads should be reduced to 15 mph speed limit.

### **6. CONSENT AGENDA**

6.1. Councilman Abernethy said there is an inaccuracy to what he said in the August 13, 2019 minutes regarding the Lake Coffey project. He said he stated that the project grew from a storage facility into adding the bathrooms costing \$150,000, to a community center with a meeting room and kitchen with an estimated cost of \$800,000. Mayor Castiglione noted the revision.

6.2. Chapter §122C-251 amendment - Transportation Agreement for Involuntary Commitments

6.3. Resolution 2020 U.S. Census Bureau

6.4. Ad valorem Tax Order to collect taxes pursuant to G.S. § 105-321-

#### **Motion**

Wendel Sauer made a motion to adopt the consent agenda with Councilman Abernethy's revisions and Barry Kaufman seconded the motion. CARRIED. unanimously.

## **7. NEW BUSINESS**

### **7.1. Convenience Center Wire Fencing installation**

#### **Motion**

Weidner Abernethy made a motion to install barbed wire fencing around the Convenience Center and Councilman Abernethy seconded the motion. MOTION FAILED for lack of the second unanimously.

### **7.2. Lower Pond Creek Boardwalk Project Bid-**

Assistant Recreation Director, Kate Prisco was present to answer questions in the absence of Recreation Director, Sean Royall. Mayor Castiglione inquired into the length of the new boardwalk, Mr. Prisco did not know the dimensions of the boardwalk and neither did Mr. Holloman know the exact footage length of the boardwalk. Ms. Prisco explained the configuration of the trail and road at Lower Pond Creek and how the boardwalk will allow access for pedestrians and hikers on the trail.

In response to Councilman Abernethy's question regarding the bids, Mr. Holloman stated that the Blue Ridge Trail Works bid was an incomplete application, and Staff is recommending the bid award go to YRU Contracting Inc., since the Blue Ridge Trail Works bid was non-responsive. Attorney Eggers reviewed the process moving forward, he said Council may reject all bids, and request another bid advertising, or may accept the lowest bid. Attorney Eggers added that by general statute the obligation to award would be to the lowest responsive, responsible bidder should Council choose to accept the bid. In Staff's review, the Blue Ridge Trail Works bid was non-responsive in meeting the required criteria. Attorney Eggers pointed out if the bid were to be accepted into a binding contract by a motion, the motion should also include that the Blue Ridge Trail Works bid was non-responsive.

Councilman Abernethy stated he wanted a third bid in order to award the contract and there was further discussion as to the bids submitted, the amount from the grant monies received for the project, which is paying \$9,200, and the advertising and notice given to multiple companies which specialize in trail work.

#### **Motion**

Wendel Sauer made a motion to accept the YRU Contracting Inc. bid and to award the contract due to their work history, scope of the project, completeness of bid proposal, and job references; and to move forward with the boardwalk portion for \$38,080, and to reject the Blue Ridge Trail works submission as that bid was non-responsive and

Carl Marquardt seconded the motion. CARRIED. 4-1 (opposed: Weidner

Abernethy).

## 8. OLD BUSINESS

### 8.1. Public Works System Development Fee Study

Public Works Water and Sewer Superintendent, Daniel Davis reviewed the process for implementing the System Development Fee Study. He said the posting has been online and the opportunity to submit comments to the Public Works Department has been open since August 14th and will be posted till October 1, 2019, this is in order for the public to respond and for the Department to receive and answer questions in accordance with Article 8 of Chapter 162A of the General Statutes to add a new section titled, System Development Fees.

All inquiries are asked to go to the website to view the report at: <https://townofbeechmountain.com/wp-content/uploads/2019/08/POSTED-Beech-Mountain-SDF-Report-20190813-System-Fee-Study.pdf> , and submit comments and concerns at: [bmus@townofbeechmountain.com](mailto:bmus@townofbeechmountain.com) .

### 8.2. Proposed amendment to Chapter 73 - an ordinance to reduce speed limits on gravel roads to 15-mph

Mayor Castiglione requested a motion to adopt the reduction of speed limits on all gravel roads to 15-mph, and no one made a motion.

Councilman Abernethy inquired about the proposed ordinance and Mayor Castiglione repeated the question and no motion was made.

Vice Mayor Kaufman made a substitute motion to reduce the speed limit on certain gravel roads, specifically the Beech Mountain Parkway extension, Lower Snowbird Trail and Upper Snowbird Trail and on Hawthorne Road to 15-mph and the motion was seconded by Councilman Marquardt.

Councilman Abernethy said he was opposed to the proposal, and he questioned the paragraph that refers to enhanced pedestrian safety, reduce slinging of gravel and decrease dust. He asked if the Police Department had issued speeding tickets in the past five years on gravel roads.

Captain Renee Carpenter reviewed police statistics and stated that there were 218 vehicle accidents in the last 5 years and there were two citations, one on a gravel road. Captain said the reason for the citation was careless and reckless driving unsafe for conditions on a gravel road, which occurred in 2014. No fatalities occurred on a gravel road. There was further discussion regarding clouds of dust in dry conditions and safety on gravel roads, vehicles and pedestrians with dogs. Captain Carpenter explained that there are more call-in complaints about speeding on the gravel roads in dry weather.

Mayor Castiglione stated that she was in favor of reducing all gravel roads to the 15 mph speed limit for enforcement logistics but believed the ordinance as such would not pass. Captain Carpenter explained how the police force

responds to calls about speeding cars and how the force clocks vehicles with radar, etc.

Vice Mayor Kaufman said on a gravel road, like Hawthorne Road, there is not enough room for pedestrians, and he chose to include the gravel roads that have bigger safety issues therefore we can reduce and lower the speed limit, to which the Mayor agreed, drivers go faster on those gravel roads that have a straight-away.

Captain Carpenter explained how traffic calming measures can reduce accidents, and the conditions such as snow, chat and ice on the gravel naturally stop speeding. Vice mayor Kaufman reiterated that the roads for reduced speed would be on: Hawthorne Road, Lower Snowbird Trail, Upper Snowbird Trail and the Beech Mountain Parkway extension starting at 1402. There was a further question and answer period with the Police Captain, regarding speeding, the weather conditions, traffic volumes and traffic calming measures. Councilman Sauer noted that he was in favor of the proposal originally but has changed his opinion throughout the continued deliberations.

Mr. Fabri asked how his road can be included, and Mayor Castiglione said citizens may petition to lower the speed limits on certain roads.

### **Motion**

Barry Kaufman made a motion to amend the ordinance to reduce the speed limit on the Beech Mountain Parkway extension, Lower Snowbird Trail and Upper Snowbird Trail and on Hawthorne Road to 15 mph as it will enhance safety and

Carl Marquardt seconded the motion. CARRIED. 3-2 (opposed: Weidner Abernethy and Wendel Sauer).

#### **8.3. Follow-Up Chapter 73 amendment to gravel road speed limits**

Attorney Eggers explained that upon adoption the ordinance is enforceable, under Chapter 20 of the vehicle code, but for police to write a criminal citation or an infraction, the statute requires that the road be posted at each end where the speed limit becomes effective and at each major intersection. There was further discussion regarding the signage, enforcement and speeding on gravel roads. Attorney Eggers stated the standards across the state and in municipalities and said the Attorney's Office would prepare the amended ordinance.

#### **8.4. Public Works new facility contractor bid- NOTE: The topic has been scheduled for a Special Called Meeting on September 18, 2019 at 3:15 p.m. in Town Council Chambers**

#### **8.5. Adopt-a-Street Program**

Mr. Holloman noted the Adopt-a-Street program was submitted to Council at the last meeting, adding that the program would be in place to encourage involvement by members of the community to work together with

the town to remove and beautify our roadways, thereby freeing them of litter. The agreement form submitted includes the volunteers' signatures, along with guidelines and safety procedures which need to be followed. He stated that summer intern, Ms. Sarah Lapish reviewed the list of procedures and safety precautions to follow at the August Council meeting. The Adopt-a-Street program has been established for communities and civic organizations as well as private businesses and industry to contribute toward the effort of maintaining cleaner and more beautiful roadsides.

Councilman Sauer stated he found several corrections that would need to be addressed before adoption, and there was a discussion about the program schedule, the roads and the equipment, and the logistics of implementation. Mr. Holloman reminded the Council that this was addressed at Town Council's retreat as part of goals for planning in the 2019-2020 fiscal year and therefore staff had followed up with the topic.

### **Motion**

Barry Kaufman made a motion to accept the Adopt-a-Street program and Carl Marquardt seconded the motion. DEFEATED. 2-3 (opposed: Renee Castiglione, Weidner Abernethy, and Wendel Sauer).

## **9. TOWN MANAGER AND STAFF REPORTS**

- 9.1. Mr. Holloman noted all reports were submitted by the departments and he reviewed the upcoming events schedule. The Town has set-up free flu shots for the public to receive on October 16 at Town Hall and a blood drive will be held on November 1, 2019 at the Buckeye Creek Recreation Center. Roadway maintenance was discussed specifically striping as well as NCDOT standards.
- 9.2. Fire Department Monthly Report
- 9.3. Police Department Monthly Report
- 9.4. Planning and Inspections Report 2019-08
- 9.5. August Parks and Recreation Report
- 9.6. TDA Report
- 9.7. Department of Infrastructure Reports

## **10. TOWN COUNCIL COMMENTS**

- 10.1. Councilman Sauer noted he did not have a comment. Councilman Abernethy had serious concerns of the direction of the Town due to lack of leadership. He was concerned that there are no measurable results and progress due to delays in infrastructure. He said there is no preventative maintenance for Public Works and there is mismanagement of the recycling center. He questioned inaccurate information such as fees and costs which change during a meeting. Councilman Abernethy cited for example, the Special Meeting on the topic of the Oz gravel road paving where the costs changed and misquoted by the manager. The Emerald Outback and biking trails are a gold mine, he said the Town should build relationships not tear

them down, to which he reviewed examples of businesses which build tax revenue in North Carolina.

Councilman Abernethy said there is no daily preventative maintenance of equipment and there is machinery which requires daily inspections. He reviewed issues at the recycling center and noted that barbed wire stops bears and said it is irresponsible not to have barbed wire, as well; he said he watched outside residents and contractors utilize our convenience center for free. He questioned why management is allowing this to continue.

He said Council did not approve a take-home vehicle by the town manager, and police take-home vehicles require approval. Councilman Abernethy questioned the attorney if the Council can amend the managers contract, to which Attorney Eggers replied the benefits package can be amended. Councilman Abernethy requested a review of the package. He said the Town is in the worst shape ever and he thanked the Oz organization for its successful event at Land of Oz.

Vice Mayor Kaufman said the facts are unfortunately distorted and wished to address them for the record. The previous examples given by Councilman Abernethy of the fencing at other recycling centers was inaccurate. Vice Mayor Kaufman said he made a site visit to one of the other recycling centers and the wire fence was half broken with garbage thrown over it. The Town is not spending \$25,000 on fencing when we are building a new Public Works Complex with a new recycling center as that would be mismanagement of funds.

Vice Mayor Kaufman asked Ms. Prisco to talk about the Enduro Bike Race which took place on the mountain. Ms. Prisco said there were 196 bikers who participated in the race and it generated \$15,600 income which was shared with the Ski Resort. Cycling benefits the town and we are taking full advantage of that resource said Vice Mayor Kaufman.

Vice Mayor addressed the take home car. He said the Town Council held two budget workshops with Council input and changes. A May 7th public hearing allowed the public to participate and a May 24th workshop allowed Council to address public input. In the budget notes, it states: 'a car allowance shall be discontinued, as long as the manager uses a take home town vehicle.' Vice Mayor Kaufman noted that Councilman Abernethy voted for the budget and this issue is addressed in the budget, as the car allowance was taken away and there is nothing hidden.

Councilman Marquardt disagreed with Mr. Jeff Fabri's position regarding lowering the speed limit on gravel roads, as he lives on a gravel road and tried driving 15 mph on his gravel road. It was difficult to do, therefore; he disagreed with Mr. Fabri and felt people speeding over 25 mph on gravel roads will also speed over 15 mph.

Councilman Marquardt wished to address Councilman Abernethy's statement about the lack of movement on infrastructure. He said in the spring the major water line and sewer line replacements occurred in Charter Hills

section of town. He said the department is working on larger major projects in order to minimize the impacts to residents, such as Village Road, so it is irresponsible to state Council is not moving forward on infrastructure projects according to the master plan as implemented with State agencies and departments.

He recounted that the new construction on the new Public Works facility begins in the spring which includes the new convenience/ recycling center with compacting dumpsters. Until then fencing ideas are a waste of money. At times the demand of the visitors will not meet the capacity and occasionally a dump looks like a dump. That is the nature of the mountain's cyclical seasons of visitors, but the long-term fix and the long term plan is in place to address this issue.

The budget is a complicated document but to make an accusation that there is a cover-up is wrong and inflammatory. Nothing was done under the table for town vehicle usage, perhaps it could have been clearer in the budget, but the accusation is self-server.

Councilman Marquardt believes staff does an excellent job of maintaining equipment and the maintenance log programs Councilman Abernethy is referring to is paperwork intensive and are profit markets for inspectors who provide the certifications. He has complete confidence in our staff who care for and use the equipment.

Mayor Castiglione noted that the public may decide for themselves and she would not address the issues as stated by the councilman as it is a monthly occurrence. Mayor Castiglione said: Public Law 915, guarantees the issuing a proclamation each year by the President of the United States of America Designating September 17 -23 as Constitution Week. It has been 231 years since drafting of our constitution and Mayor Castiglione proclaims September 17 - 23 as Constitution Week.

## **11. CITIZENS' AGENDA COMMENTS**

**11.1.** Mr. Joe Johnston of 1420 Beech Mountain Parkway stated he was in favor of the 15-mph gravel road speed reductions. The construction trucks use the extension as the main thoroughfare and Mr. Johnston is concerned with speeding trucks.

Mr. Rob Ruscak of 132 Wintergreen Way requested Council to add Wintergreen Way and for the speed limit to be 14 or 16 mph.

Mr. Larry Burn of Hawthorne Road was in favor of lower speed limit on Hawthorne Road and he thanked Council for reducing the speed limit.

Mr. Lisa Johnson of 1420 Beech Mountain Parkway requested speed bumps to which Mayor Castiglione stated the mountain cannot install speed bumps as a traffic calming measure due to the snow plowing that must take place in the winter.

## **12. ADJOURNMENT**

**12.1.** There being no further business, Mayor Castiglione requested an

adjournment at 5: 29 p.m.

Note: the above minutes are not a verbatim transcript of the meeting.  
Audio and/or video archives are recorded and accompany the meeting on the  
Town's Civic Engagement Portal at:  
<https://townofbeechmountain.civicweb.net/Portal/>

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Town Clerk

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Mayor, Town of Beech Mountain





# MINUTES

## Special Town Council Meeting

3:15 PM - Wednesday, September 18, 2019  
Council Chambers

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The Special Town Council of the Town of Beech Mountain was called to order on Wednesday, September 18, 2019, at 3:15 PM, in the Council Chambers, with the following members present:

**COUNCIL PRESENT:** Mayor Renee Castiglione  
Vice-Mayor Barry Kaufman  
Councilman Carl Marquardt  
Councilman Weidner Abernethy  
Councilman Wendel Sauer

**COUNCIL EXCUSED:**

**STAFF PRESENT:** Town Manager Tim Holloman  
Attorney Stacy Eggers, IV  
Town Clerk Tamara Mercer  
Public Utilities Superintendent Daniel Davis  
Town Planner Preston Yates  
Director of Special Projects Riley Hatch  
Director of Infrastructure Robert Heaton  
Public Works Superintendent Matthew Clawson

### 1. CALL TO ORDER

### 2. PUBLIC COMMENT

2.1. Ms. Bell Brunett of the Pinnacle Inn said she is an owner of property at the Pinnacle Inn. Ms. Brunett was concerned with loss of a view and noise. She wanted to know the maximum height of the building and the impacts from building 2. She has a view of the mountain. She said some trees have been installed so far but was still concerned with noise from the complex and asked if cement walls could be installed for a noise deterrent. She inquired into the hours of operation and did not want extended hours. Ms. Burnett is concerned with the property values. If her property values decrease and if she will have larger tax and utility bills.

2.2. Mr. Bill Newell, an owner of a unit at building 3, in Pinnacle Inn said he was concerned with junk, the slag pile, garbage and trucks at the new Public Works facility. He asked if that storage would be kept internal, to which Mr. Holloman addressed Mr. Newell's concern, and said that is one of the reasons

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for the new facility, as the chat pile and slag pile will be housed internally, and the public won't see the piles.

Mr. Newell said he agreed with Ms. Burnett and is concerned with the small cedar saplings planted for tree landscaping. He requested larger evergreens be planted in order to buffer the noise. He reiterated he wanted a border for the slag piles.

### **3. NEW PUBLIC WORKS FACILITIES**

#### **3.1. New Public Works Facilities Bids**

Mr. Benjie Thomas, Engineer with West Consultants, PLLC, the engineering firm that designed the project and layout of the new facilities, produced the renderings of the new Public Works buildings and site plan. He said the drawings are representative of the main building, which would be 12,000 square feet for housing the large six bays, with equipment lifts, workshops and offices for personnel. The salt storage building consists of 2,000 square feet and the new convenience center, which includes the garbage dump and material recycling center. There will be a shelter, garbage compactors and containers, as well as car ports and an equipment/ vehicle wash, as well as other amenities.

Mr. Thomas said the road paving extends to the water tanks and the road will have a one-way traffic pattern circulation. An unknown factor will be the excavation as the rock must be drilled. The Town hired a firm to take samples of the rock in order to estimate the excavation costs. The costs are based on the bid estimate per unit price and if there is less rock to drill, the town saves money. But this excavation and rock removal is a cost per cubic yard basis, so the estimate is based on the sample measured.

The construction is estimated to take 480 days to completion of the complex, this is all an approximation due to unknown factors such as weather conditions and rock drilling. Mr. Thomas explained the expected time-line for the schedule, which if Council approves the bid and moves forward, the project will begin in October and finish in February of 2021. He noted that the plans include the vegetative buffer around the perimeter and included the property lines at the Pinnacle Inn in accordance to the zoning ordinance, which will include a mixture of Evergreen trees between 5'-8' heights.

Mr. Thomas explained the bid process wherein advertisements were distributed widely and regionally throughout the counties and states. Seven general contractors attended the mandatory pre-bid meeting and four formal bids were submitted out of the seven companies. Mr. Thomas noted that Council received those bids in the summary packet. The bids ranged from \$4,572,000.00, the lowest from MBI Builders, LLC of North Wilkesboro to the highest of bid of \$6,890,405.00. The consultant reviewed all bids for compliance and meeting the required criteria, as well as researched the references. Mr. Thomas said that while they have not worked directly with MBI Builders, the company is known to them through working with other architects and owners, and the company has received all positive reviews and the

referrals all state that they would work with MBI Builders again.

The four and half-million-dollar budget includes the cost of construction and grading, the excavation is estimated. In addition, there will be the bill from West Consultant firm as well as fees from the soil and concrete testing, and legal and permitting fees. There is an additional \$20,000 for furnishings as well as unforeseen contingency costs such as the extra rock which may be encountered and other unforeseen issues such as weather conditions. West Consultants estimates the total cost of the budget to be at 5.2-million and the firm recommends awarding the contract to the bidder, MBI Builders in the amount of \$4,572,000 in order to proceed.

Councilman Abernethy said there is a large price discrepancy between the highest and lowest bids and Mr. Thomas said it is not unusual to have the discrepancy as the highest bidders who submitted are large companies and Beech Mountain is in a remote area, which increases the costs. Mr. Thomas said he sent invitations to Moss Marlow. The contractor has not filed bankruptcy and the project will be under the bid bonds for assurance to the Town of completion. Mr. Thomas said there is a 5% penalty to MBI if they were not to complete the job on-time. There is a payment bond and a performance bond at 100% of the contract value, which means there is insurance and a bonding company which backs up the project, if the contractor were to walk away or go bankrupt. The Town receives 5% of the contract bid.

In response to Councilman Abernethy's question regarding the vehicle wash system, Mr. Thomas said while the company is from Spain, the parts are manufactured in Bristol, TN. Councilman Abernethy said he wished to visit one of the sites the prospective bidder built. Mr. Holloman said the cost of the bid is 4.5-million, which is what Council may consider awarding.

Councilman Marquardt noted that originally the project was seeking LEED certification, (Leadership in Energy and Environmental Design), and he inquired if there was still an eye to performance and environmentally friendly requirements we could meet, even though we don't have the budget for the full program; to which Mr. Thomas stated that although the project will not meet LEED standards, it will be well insulated, with energy efficient heat and air, high efficiency fixtures, treated storm-water runoff and solar panels for water heating.

Councilman Sauer inquired about the references and asked if they were smaller or larger projects. Mr. Thomas said two references were commercial buildings, one was for a State park shelter and was a custom design, and one was a culinary center for Wilkesboro Community College. That large scale project included a pre-engineered metal building and amenity facility. He added that the fenestration materials for the new Public Works facilities have long term durability, but the aesthetically appealing wood accents on the building require maintenance, such as sealing and painting.

There was further discussion regarding the extra costs for rock excavation and soil testing, the fixed costs were reviewed and local contractors and suppliers who are regional was discussed. Mr. Hatch explained how we

chose the vehicle/ equipment wash system and the maintenance for the equipment. Attorney Eggers noted that the bid award is for the contract, the general contractor uses their discretion as to who to hire as their sub-contractors as long as they meet licensure requirements. The contractor assesses the team's ability and they may change their sub-contractors. It is at the staff level to monitor costs and deadlines.

Mr. Holloman added he would get the Pinnacle Inn residents copies of the project plans and renderings. In response to Mr. Newell's inquiry, Mr. Holloman explained the garage door elevations and the roof height, as viewed from the Pinnacle Inn, one will see approximately 10' of the salt building.

- 3.2.** Mr. Drew Hagan and Mr. Jayme Macmore from MBI Builders, LLC were present to answer questions. Mr. Hagan reviewed the history of MBI Builders and the latest significant projects which were presented as examples to Council. Mr. Hagan presented photos of the Culinary Lab at Wilkesboro Community College facility which they constructed on the campus along with other projects on the campus.

He said MBI Builders was established 10-years ago. There are both commercial and residential divisions and they have constructed higher education facilities, churches, retail, and lumber yards. He presented more photos of comparable projects the size and scale to the Town's new Public Works project. The pre-engineered project contained a metal 58,000 square foot building compete with storm water retention ponds. Mr. Macmore explained the components of building the facility and more photos and projects by MBI were reviewed.

Councilman Abernethy reiterated he wants to perform a site visit to North Wilkesboro in order to look at the facilities before awarding the bid, to which Councilman Marquardt said Staff and specifically Special Projects Director, Mr. Hatch has been working on the project for multiple years, and he disagreed with further delay of the project. He believed the well-researched project was within the parameters of the bid package and it is time to provide for the next 20 years of growth.

Mayor Castiglione added that the recent 6-million-dollar project for the Town's water treatment plant was large in scale and West Consultants and the engineers proved trust-worthy. Based on past positive experience, they can move forward. She added the site visit is a good idea, but timing is off. Mr. Holloman noted that the project is not extraordinary in scope as we are building rectangular buildings and we have checked references. The design is not for a specialty angular type building.

Mr. Thomas reviewed the referencing checking process at West Consultants and said while he has not personally worked with MBI, he was impressed with the very positive responses throughout the industry from the end users to the design professionals. There is of course some risk, and therefore the bonding mitigates that risk. The general contractor has a huge role in expediting the project and there was further discussion about the performance bond, the payment bond, the surety agreement and the project

deadlines.

**Motion**

Carl Marquardt made a motion to accept the lowest, responsive and responsible bid from MBI Builders to construct the new Public Works Facilities subject to the Attorney's Office review and Barry Kaufman seconded the motion. CARRIED. 4-1 (opposed: Weidner Abernethy).

**4. ADJOURNMENT**

- 4.1. There being no further business, Mayor Castiglione requested a motion for adjournment at 4:25 p.m.

**Motion**

Wendel Sauer made a motion to adjourn and Carl Marquardt seconded the motion. CARRIED. unanimously.

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Town Clerk

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Mayor, Town of Beech Mountain





## COUNCIL ACTION ITEM

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**TO:** Mayor & Town Council  
**FROM:** Bob Pudney  
**DATE:** October 1, 2019  
**SUBJECT:** Parcel property donations

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**FOR THE PURPOSE OF:**

To consider accepting private property donations: 142 Buckeye Creek Road, Charles Hall property donation-PID: 194117128169 & address TBD for West Pond Creek PID:1950122948000.

**SIGNATURES:**

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Town Manager

---

Town Clerk

Excise Tax \_\_\_\_\_ Recording Time, Book and Page \_\_\_\_\_  
Parcel ID: \_\_\_\_\_ Parcel Identifier No. **1941-17-12-8169-00000**  
Verified by **Avery** County on the **30<sup>th</sup>** day of **September, 2019**.

Mail after recording to: **Town of Beech Mountain, c/o Tim Holloman,  
403 Beech Mountain Parkway, Beech Mountain, North Carolina, 28604**

This instrument was prepared by: **Eggers, Eggers, Eggers, and Eggers, PLLC,  
Attorneys at Law, P. O. Box 248, Boone, North Carolina 28607  
(With a Limited Title Search Prepared by this Office)**

Brief Description for the Index: **Lot BHW-86, Buckeye Hills West Section,  
Beech Mountain, North Carolina**

**NORTH CAROLINA GENERAL WARRANTY DEED**

**THIS DEED**, made this **30th day of September, 2019**, by and between:

<b>GRANTORS</b>	*	<b>GRANTEE</b>
	*	
<b>Charles N. Hall (single)</b>	*	<b>Town of Beech Mountain</b>
	*	<b>403 Beech Mountain Parkway</b>
	*	<b>Beech Mountain, NC 28604</b>
	*	
	*	
	*	

Please enter in appropriate block for each party, name, address, and if, appropriate,  
character of entity, e.g. corporation or partnership

The designation Grantors and Grantee as used herein shall include said parties,  
their heirs, successors and assigns, and shall include singular, plural,  
masculine, feminine or neuter as required by context.

**WITNESSETH:**

The Grantors, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, have and by these presents do grant, bargain, sell and convey unto the Grantee in fee simple, that certain lot or parcel of land situated in the Township of **Beech Mountain, Avery County, North Carolina**, and more particularly described as follows:

**BEING all of Lot BHW-86 of the Buckeye Hills West Section of Beech Mountain Subdivision of Carolina Caribbean Corporation, as the same platted, planned, and recorded in Map Book, 4, Page 175 of the Avery County, N.C. Public Registry.**

**This conveyance is made in accordance with North Carolina General Statutes, Sec. 39-13.4, and it is intended to confer upon the Grantee herein title to all interests of the Grantor in fee simple, and it is understood and agreed that the Grantee herein shall have the right to convey the same, in accordance with said Statute, without the consent or joinder of the Grantor.**

**It is the express intention of the parties hereto that this conveyance is to be considered a conveyance to the Grantee of separate property under North Carolina General Statute, Sec. 50-20, the Equitable Distribution of Martial Property Act.**

The property hereinabove described was acquired by Grantors by Deed Book of Records **171** at Page **1208**, Avery County Registry.

A map showing the above described property is recorded in Map Book **4** at Page **175**, Avery County Registry.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereunto belonging to the Grantee in fee simple.

And the Grantors covenant with the Grantee, that Grantors are seized of the premises in fee simple, and have the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantors will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. All warranties herein are subject to the following exceptions:

**Street, road and utility rights of way and easements shown on plat referred to above, or which may otherwise appear of record applicable to this property.**

The above described property **DOES NOT** include the primary residence of the Grantors herein.

**SPACE INTENTIONALLY LEFT BALNK**

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals, the day and year first above written.

\_\_\_\_\_ (SEAL)  
**Charles N. Hall**

\*\*\*\*\*

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, Notary Public, do hereby certify that **Charles N. Hall**, personally appeared before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein expressed.

WITNESS my hand and notarial seal, this \_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_ (SEAL)  
Notary Public

My commission expires: \_\_\_\_\_



Author: Preston Yates

Date: 8/30/2019

Document: \\SERVER12\Shared Folders\Company\Planning\MAPS\Projects\Base Map 8x11.mxd

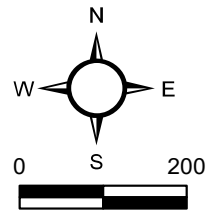
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



# CHARLES HALL PROPERTY ZONING MAP

Source: Beech Mountain GIS

This product is for informational purposes and is not suitable for legal, engineering, or surveying purposes. Users of this map and the contents therein are solely responsible for interpretations made from these products. Town of Beech Mountain cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, accompanying this product.



1 inch = 200 feet

Excise Tax \_\_\_\_\_ Recording Time, Book and Page \_\_\_\_\_  
Parcel ID: \_\_\_\_\_ Parcel Identifier No. **1950-12-2948-000**  
Verified by **Watauga** County on the **30<sup>th</sup>** day of **September,**  
**2019.**

Mail after recording to: **Town of Beech Mountain, c/o Tim Holloman,**  
**403 Beech Mountain Parkway, Beech Mountain, North Carolina, 28604**

This instrument was prepared by: **Eggers, Eggers, Eggers, and Eggers, PLLC,**  
**Attorneys at Law, P. O. Box 248, Boone, North Carolina 28607**  
**(With a Limited Title Search Prepared by this Office)**

Brief Description for the Index: **Lot 12 of the property known as West Pond**  
**Creek Condominiums, Beech Mountain, North Carolina**

**NORTH CAROLINA GENERAL WARRANTY DEED**

**THIS DEED**, made this **30th day of September, 2019**, by and between:

<b>GRANTORS</b>	*	<b>GRANTEE</b>
	*	
<b>Gerlero Properties, LLC</b>	*	<b>Town of Beech Mountain</b>
<b>2118 Lake Drive</b>	*	<b>403 Beech Mountain Parkway</b>
<b>Winter Park, FL 32789</b>	*	<b>Beech Mountain, NC 28604</b>
	*	
	*	
	*	

Please enter in appropriate block for each party, name, address, and if, appropriate,  
character of entity, e.g. corporation or partnership

The designation Grantors and Grantee as used herein shall include said parties,  
their heirs, successors and assigns, and shall include singular, plural,  
masculine, feminine or neuter as required by context.

**WITNESSETH:**

The Grantors, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, have and by these presents do grant, bargain, sell and convey unto the Grantee in fee simple, that certain lot or parcel of land situated in the Township of **Laurel Creek, Watauga County, North Carolina**, and more particularly described as follows:

**BEING all of Lot 12 of the property known as West Pond Creek Condominiums, Beech Mountain, as shown on plat thereof recorded in Map Book 4 at Page 181 of the Watauga County North Carolina Public Registry.**

**This conveyance is subject to Declaration of Restrictions recorded in Book 104 at Page 638 of the Watauga County North Carolina Public Registry, which restrictions are incorporated herein by reference.**

The property hereinabove described was acquired by Grantors by Deed Book of Records **1134** at Page **527**, Watauga County Registry.

A map showing the above described property is recorded in Plat Book **14** at Page **45**, Watauga County Registry.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereunto belonging to the Grantee in fee simple.

And the Grantors covenant with the Grantee, that Grantors are seized of the premises in fee simple, and have the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantors will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. All warranties herein are subject to the following exceptions:

**Street, road and utility rights of way and easements shown on plat referred to above, or which may otherwise appear of record applicable to this property.**

The above described property **DOES NOT** include the primary residence of the Grantors herein.

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals, the day and year first above written.

**BY: \_\_\_\_\_ (SEAL)**  
**Gerlero Properties, LLC, Grantor**  
**Member Manager**

\*\*\*\*\*

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, Notary Public, do hereby certify that **Gerlero Properties, LLC by and through \_\_\_\_\_, Member Manager**, personally appeared before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein expressed.

WITNESS my hand and notarial seal, this \_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
Notary Public (SEAL)

My commission expires: \_\_\_\_\_



Author: Preston Yates

Date: 8/26/2019

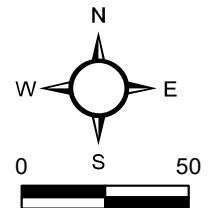
Document: \\SERVER12\Shared Folders\Company\Planning\MAPS\Projects\Base Map 8x11.mxd



# W. POND CREEK PROPERTY EXISTING CONDITIONS MAP

Source: Beech Mountain GIS

This product is for informational purposes and is not suitable for legal, engineering, or surveying purposes. Users of this map and the contents therein are solely responsible for interpretations made from these products. Town of Beech Mountain cannot accept any responsibility for errors, omissions, or positional accuracy. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, accompanying this product.



1 inch = 50 feet



## COUNCIL ACTION ITEM

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**TO:** Mayor and Town Council  
**FROM:** Tamara Mercer  
**DATE:** October 1, 2019  
**SUBJECT:** Avery County Board of Elections Agreement

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**FOR THE PURPOSE OF:**

Town of Beech Mountain and Avery County Board of Elections Agreement for conducting and tabulating municipal elections for the Town of Beech Mountain as per G.S. 163A-1589, term period September 30, 2019 through September 30, 2021.

**SIGNATURES:**

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**Town Manager**

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**Town Clerk**

NORTH CAROLINA  
AVERY COUNTY

**AGREEMENT**

THIS AGREEMENT made and entered into this the 30 day of Sept 2019 by and between Beech Mountain, a municipal corporation hereinafter referred to as "Municipality" and the Avery County Board of Elections hereinafter referred to as "Board of Elections."

**WITNESSETH**

THAT, WHEREAS, The above named Municipality will continue its agreement with the Board of Elections to conduct its future municipal elections; and

WHEREAS, The Board of Elections will conduct said municipal elections upon proper execution of this Agreement; and

WHEREAS, Parties to this agreement acknowledge that fair and accurate elections cannot take place without the Board of Elections receiving accurate and complete voting district and voting schedule information from the Municipality sufficiently in advance of the election to assign voters properly; and

WHEREAS, when contracting with a county board of elections for the conduct of its elections, a municipality is required to pay the actual cost of conducting said election. For budgeting purposes, however, the Board of Elections understands that it would benefit municipal officials to have the most accurate estimate of costs possible for allocation of budget revenues.

Barring new laws, annexations, districting, redistricting, ward changes, any other changes by the Municipality and other variables, the Board of Elections does not anticipate the cost of the next election to increase more than ten percent. If it learns that the increase will exceed ten percent, the county board of elections will notify the Municipality as soon as they are aware. The Board of Elections, therefore, estimates that the current year's municipal election costs will not be likely to increase more than ten percent of its most recent odd-numbered-year election costs billing.

To determine the ten percent estimated increase, the Municipality should refer to its files for the most recent odd-numbered-year election billing with comprehensive sheet showing complete and detailed directly related charges billed and explanations as to arrival at prorated charges.

NOW, THEREFORE, IT IS MUTUALLY UNDERSTOOD AND AGREED BETWEEN THE PARTIES HERETO THAT:

- 1) The Board of Elections shall conduct all elections required by law or duly called by said Municipality, all as by law provided.
- 2) It is the responsibility of the Municipality to provide the Board of Elections with clear and accurate maps, districts, municipal lines, government changes and proof of preclearance.
- 3) The Municipality shall pay to the Board of Elections the actual cost involved in the administration required in conducting an election within thirty days of receipt of billing, subject to the setoff of retained filing fees. Actual costs of an election shall include, but is not limited to all expenses, travel, actions and labor in the preparation for and conduct of all primaries, runoffs, and elections. Actual costs shall also include expenses, transportation, and labor costs for election protests, petition examination and petition certification that may arise from the election. The Board of Elections shall not be responsible for any expenses arising from litigation from a municipal election, except as to allegations that the Board failed to follow the instructions of the Municipality as to the election or was negligent in the conduct of the election. In addition, if the Municipality requires annexation activation, ward defining, districting, or redistricting work, actual costs will be charged by the Board of Elections to the Municipality in the year of municipal elections. Reference should be made to previous billings for estimated cost of such work that may include mailing of annexation notifications, required overtime of staff and related cost of supplies. The Municipality shall be entitled to a detailed billing for the incurred costs. G.S. 163A-1589.
- 4) If the Board of Elections conducts an election for said Municipality simultaneously with a countywide election, all actual expenses incurred for conducting the municipal election in excess of the cost for the countywide election shall be reimbursed by said Municipality to the Board of Elections.
- 5) The number of and compensation for poll workers and voting machine technicians, along with election preparations and training and programming of voting machines, as well as other matters directly related to any election, shall be determined according to federal election laws, North Carolina Administrative code and General Statutes of North Carolina by the State Board of Elections and the Avery County Board of Elections.
- 6) The North Carolina State Board of Elections and Avery County Board of Elections have jurisdiction over election matters. Therefore, any questions or problems concerning elections, including billing, should be brought directly to the Avery County Board of Elections for resolution. If not resolved satisfactorily

within a reasonable or statutory period, appeals may be made to the North Carolina State Board of Elections under the provisions of G.S. 163A-1631.

- 7) All municipal filing fees paid to the Board of Elections shall be deposited to the account of Avery County and deducted from the Municipality's election costs. The Municipality will be provided exact written information as to the fees collected.
- 8) The term of this Agreement shall be for a two-year period, commencing on the first day of September 30, 2019 and terminating on September 30, 2021. The term of this Agreement shall be automatically extended for successive two (2) year periods unless either party provides verified hand delivered notice to the other party of its intent to terminate the agreement no later than the first day of May of the year the termination is to be effective.
- 9) If the Municipality desires to allow absentee voting in its elections or to eliminate absentee ballots, it shall be the responsibility of the Municipality to comply with the provisions of G.S. 163A-1630.

IN TESTIMONY WHEREOF, said Municipality has caused this instrument to be executed in its corporate name by its Mayor, its Official Seal to be affixed and attested by its Clerk, and the Avery County Board of Elections has caused this instrument to be executed in its name by all members and attested by its Director in duplicate originals, the day and year first above written; one duplicate original to be retained by each of the parties hereto.

THIS, THE \_\_\_\_ DAY OF \_\_\_\_\_, 2019

BY \_\_\_\_\_

\_\_\_\_\_, MAYOR

ATTEST

\_\_\_\_\_, CLERK

(Municipal Seal)

APPROVED

\_\_\_\_\_

\_\_\_\_\_, MUNICIPAL ATTORNEY

AVERY COUNTY BOARD OF ELECTIONS

BY \_\_\_\_\_ CHAIRMAN

\_\_\_\_\_ SECRETARY

\_\_\_\_\_ MEMBER

\_\_\_\_\_ MEMBER

\_\_\_\_\_ MEMBER

ATTEST:

\_\_\_\_\_

SHEILA OLLIS, DIRECTOR

APPROVED:

\_\_\_\_\_

\_\_\_\_\_, COUNTY ATTORNEY





## COUNCIL ACTION ITEM

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**TO:** Town Council  
**FROM:** Daniel Davis  
**DATE:** October 1, 2019  
**SUBJECT:** System Development Fee Study

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**FOR THE PURPOSE OF:**  
System Development Fee Study acceptance.

**ATTACHED FOR YOUR CONSIDERATION:**  
SDF Ordinance, SDF Resolution, PDF of Complete Study

**STAFF RECOMMENDATION:**  
Proceed with adoption.

**SIGNATURES:**

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Town Manager

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Town Clerk



Ordinance

Town of Beech Mountain  
North Carolina

Date: 10/1/2019

**Ordinance No. 2019-06**

**AN ORDINANCE TO ADOPT SYSTEM DEVELOPMENT FEE STUDY FOR THE  
WATER AND SEWER SYSTEM AS AUTHORIZED BY ARTICLE 8 OF CHAPTER  
162A OF THE NORTH CAROLINA GENERAL STATUTES.**

**WHEREAS**, the North Carolina General Assembly has enacted Session Law 2017-138 (HB 436), known as the "Public Water and Sewer System Development Fee Act" amending Chapter 162A of the General Statutes to add a new Article 8, titled System Development Fees; and

**WHEREAS**, said statutes authorize the procedures and methods for the calculation and authorization of system development fees to be charged by local governments; and

**WHEREAS**, the Town of Beech Mountain contracted with professional consulting engineers McGill Associates, to perform the system development fee analysis per the requirements of Session Law 2017-138, having posted public notice and written analysis on its website beginning August 14, 2019 and also provided means to solicit comments both through the website and via written means through the U.S. Mail, and has held a properly advertised public hearing on, October 1, 2019, to receive additional public comments; and

**WHEREAS**, said statutes define a System Development Fee as a charge or assessment for service imposed with respect to new development to fund costs of capital improvements necessitated by and attributable to such new development, to recoup the costs of existing facilities which serve such new development, or a combination of those cost; and

**WHEREAS**, said statutes provide that System Development Fees may be collected for new development which increases the capacity necessary to serve that development as further described below.

(A) (1) System development fees shall be charged with respect to new development to fund costs of capital improvements to recoup a combination of costs consisting of the cost of existing facilities which serve such new development and the incremental cost of capital assets required for preserving and/or providing additional system capacity. System development fees shall be charged consistent with the requirements of G.S. Ch. 162A, Article 8 as such may be amended from time to time. Terms used in this section shall have the same meanings as set forth in G.S. Ch. 162A, Article 8.

(2) For purposes of this section, **NEW DEVELOPMENT** includes any of the following occurring after October 1, 2019 (the date the town began the written analysis process required by G.S. § 162A-205) that increases the water and/or sewer capacity necessary to serve that development:

(a) The subdivision of land;

(b) The construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure which increases the number of service units; or

(c) Any use or extension of the use of land which increases the number of service units.

(B) Beginning on the effective date of this section, system development fees shall apply to all new development except for fire line connections.

(C) System development fees shall not include and separate charges may be assessed for:

(1) A charge or fee to pay administrative, plan review, or inspection costs associated with permits required for development.

(2) Tap or hookup charges for the purpose of reimbursing the town for the actual costs of connecting the service unit to the system.

(3) Availability charges.

(4) Dedication of capital improvements onsite, adjacent, or ancillary to a development absent a written agreement providing credit or reimbursement to the developer pursuant to G.S. §§ 160A-320, 160A-499 or G.S. Ch. 160A, Art. 19, Part 3D as the same may be amended from time to time.

(5) Reimbursement to the town for its expenses in constructing or providing for water or sewer utility capital improvements adjacent or ancillary to the development if the owner or developer has agreed to be financially responsible for such expenses; however, such reimbursement shall be credited to any system development fee charged as required per G.S § 162-207(c).

(D) System development fees will not be charged on buildings or other improvements constructed to replace like buildings provided that the replacement will not result in any increased capacity requirements over that required to serve the replaced building. System development fees are transferable between locations on different parcels of property as long as the parcels are contiguous or separated only by a street or alley and part of a single or multi-phased project shown on an approved site plan at the time of issuance of a building permit.

(E) (1) For new development involving the subdivision of land, the system development fee shall be collected at the later of the time of plat recordation, or when water or sewer service is committed by the town.

(2) For all other new development, system development fees are due at the earlier of the time of application for connection of the individual unit of development to the service or facilities, or when water or sewer service is committed by the town.

(3) For purposes of this section, water and/or sewer service shall be deemed committed by the town at such time as the Department of Infrastructure has approved the connection and building permit(s) for the development are issued. Fees shall be assessed based on the schedule of fees in effect at the time the fees are collected.

(F) Additions, alterations to or replacements or change in use of existing buildings shall be required to pay a system development fee based on the rates applicable at the time of connection or at the time such addition, alteration, replacement or change in use is placed into service. When a change in use occurs, the new use will pay the difference calculated between the existing use and the proposed use.

(G) Buildings that contain more than one use shall have the system development fee calculated from the sum of each use in the building.

(H) (1) The following system development fee shall be paid for connections to the town municipal water and sewer systems based on the customer's calculated anticipated daily flow rate in gallons per day (GPD). The system development fee shall be the same regardless of the customer's location inside or outside the municipal limits of the town. At the time of adoption of this Ordinance, the calculated maximum cost per gallon per day as determined by McGill Associates is \$16.90 for water and \$10.45 for sewer. The Town may charge any amount up to the calculated maximum as it may determine and publish in its annual budget, rate plan or ordinance.

(2) System development fees shall be based on the calculated (GPD) flow rate of the anticipated use or increase in use of the proposed structure. Flow rates shall be determined in accordance with the flow rates established in the North Carolina Administrative Code, 15A NCAC 2T.0114 and 15A NCAC 18C.0409 as such may be amended from time to time. A licensed professional engineer is required to calculate flow rates for other uses not included within the North Carolina Administrative Code, 15A NCAC 2T.0114 and 15A NCAC 18C.0409. The Town of Beech Mountain shall not incur any expense associated with this requirement.

(I) In calculating system development fees with respect to new development, the town will credit the value of costs in excess of the development's proportionate share of connecting facilities required to be oversized for use of others outside of the development. No credit shall be applied, however, for water or sewer capital improvements on-site or to connect new development to water or sewer facilities.

(J) All system development fees collected by the town shall be deposited to the town's water and sewer capital reserve funds and expended as provided by G.S. § 162A-211, as such may be amended from time to time.

**NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF BEECH MOUNTAIN THAT:**

The Water System Development Fee Study prepared by McGill Associates, and published October 2, 2019, is adopted to assist in establishing Beech Mountain's Water System Development Fee Charges, which shall be established annually and published as part of the Town's fee schedule within the Annual Budget Ordinance.

These System Development Fees shall be effective October 2, 2019, and shall be published annually in the Town's budget, or associated fee schedule. The system development fee calculation shall be updated at least every five (5) years or as required by G.S. Ch. 162A, Article 8.

I move the adoption of the foregoing ordinance. \_\_\_\_\_

Town Manager

**READ, APPROVED AND ADOPTED**, by a vote of \_\_\_ to \_\_\_ this the \_\_\_ day of \_\_\_\_, 2019.

ATTESTED:

\_\_\_\_\_  
Renee Castiglione, Mayor

\_\_\_\_\_  
Tamara Mercer, Town Clerk

**RESOLUTION #2019-05**

**RESOLUTION TO ADOPT FEE STUDY TO THE WATER RATE AND FEE SCHEDULE FOR THE TOWN OF BEECH MOUNTAIN, NORTH CAROLINA PERSUANT TO NC GS 162A**

**WHEREAS**, the North Carolina General Assembly enacted House Bill 436 in July 2017, amending Chapter 162A of the North Carolina General Statutes by adding "Article 8 System Development Fees; and; and

**WHEREAS**, said statute authorizes the procedures and methods for the calculation and authorization of system development fees to be charged by local governments; and

**WHEREAS**, the statute authorizes a local government to adopt a system development fee calculated based upon a written analysis prepared by a financial professional or licensed professional engineer; and

**WHEREAS**, the Town of Beech Mountain contracted with professional engineering firm McGill Associates, a qualified and licensed professional engineer and consulting firm to perform a system development fee analysis; and:

**WHEREAS**, McGill Associates prepared a computerized calculator which will determine System Development Fees for water and sewer based on the Cost per Gallon per Day (GPD) Calculation table by using water and sewer demands as defined by NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114 (attached Exhibit A)

**WHEREAS**, the Town of Beech Mountain has taken all required steps pursuant to Article 8 of NCGS 162A, including posting of the fee analysis study on the Town's website for forty-five (45) days and solicited public comments regarding the same; conducted a public hearing on **October 1, 2019** to receive additional public comment, which was properly noticed through advertisement; and adoption of this resolution to include the determination of the system development fees;

**NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Beech Mountain that:**

1. The System Development Fee Study, prepared by McGill Associates is hereby adopted to establish Beech Mountain's Water System Development Fee Rate and Schedule;
2. The maximum allowable cost per gallon per day established per the System Development Fee Study is \$16.90 / GPD for Water and \$10.45 / GPD for Sewer.
3. The percentage of the above values to be charged in calculating the total System Development Fee per unit by utilization of the System Development Fee Calculator program shall be 35% of the total maximum allowable cost within the fee study, resulting in the following fee charges to be applied:

**\$5.92 / GPD Water, \$3.66 / GPD Sewer**

These fees shall apply equally to applicants for properties both inside and outside the Town of Beech Mountain Corporate Limits.

4. Fees are based, for Residential applicants, on number of bedrooms, and for Business applicants, on type and occupancy. (see attached exhibit A: NCAC tables) All applicants must inquire with Water Administration (water department) for fee determination.

5. The Town Council shall review and/or update the System Development Fee rate schedule no later than five (5) years from the date of this resolution, unless otherwise required by North Carolina law.

These Water System Development Fees shall be effective as of the date of this Resolution and all Water fee and rate schedules shall be included and published in the annual budget for the Town of Beech Mountain, North Carolina.

I move the adoption of the foregoing resolution:

\_\_\_\_\_  
Renee Castiglione, Mayor

READ, APPROVED AND ADOPTED, by a vote of \_\_\_ to \_\_\_ this the \_\_\_ of \_\_\_\_\_, 2019.

ATTEST:

\_\_\_\_\_  
Tamara Mercer, Town Clerk

\_\_\_\_\_  
Tim Holloman, Town Manager

**DRAFT REPORT**

**COST- JUSTIFIED WATER SYSTEM  
DEVELOPMENT FEES REPORT**

**TOWN OF BEECH MOUNTAIN**

**AVERY AND WATAUGA COUNTIES, NC**

James Bourey, Director of Consulting Services  
Dale R. Schepers, Senior Consultant



1240 19<sup>TH</sup> Street Lane NW  
Hickory, North Carolina 28601  
Firm License No.: C-0459

**AUGUST 2019**  
**PROJECT NO. 19.02513**

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**EXECUTIVE SUMMARY and PURPOSE STATEMENT**

**Executive Summary:**

The North Carolina General Assembly passed House Bill 436 (HB 436) in July 2017, amending Chapter 162A of the General Statutes by adding “Article 8, System Development Fees.” This amendment was enacted as “An Act to Provide for Uniform Authority to Implement System Development Fees for Public Water and Sewer Systems in North Carolina and to Clarify the Applicable Statute of Limitations” which requires compliance with designated calculation methodology.

In response to the HB 436, the Town of Beech Mountain has retained McGill Associates (McGill) to complete a system development fee analysis. The Town of Beech Mountain’s development fee is dependent on a combination of existing system capacity and planned capital improvements to expand capacity. The development fee, in accordance with HB 436 rules for an Equivalent Residential Unit (ERU) for water and sewer, was calculated to be \$10,521. ERU is defined as the water and sewer capacities required to serve the most typical user type, which is a three-bedroom single-family dwelling.

The fee for other types of development can be calculated by applying the calculated cost of capacity per gallon of flow per day to the water demands for various uses as defined by NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114 using the following table:

**Table 0.0.1 – System Development Fee Calculation: Cost per Gallon per Day (\$/GPD)**

Beech Mountain System Development Fees: Cost per Gallon per Day Calculation				
Item	Cost-Justified System Development Fee Calculation			Cost of Capacity \$ / GPD
1	Water System			\$ 16.90
2	Sewer System			\$ 10.45

**Purpose Statement:**

This report documents the results of the approach, methodology and calculations for establishing system development fees in accordance with North Carolina General Statute 162A, Article 8 “System Development Fees”. Through HB 436, the General Assembly of North Carolina established a uniform approach and associated methodology required for local governmental units to calculate and implement System Development Fees (SDF) for public water and sewer systems. The SDF must be determined by a qualified engineer or financial professional using industry standard practices. A copy of HB 436 is included in the Appendix.

The existing fees that were collected on October 1<sup>st</sup>, 2017 for the purpose of offsetting capital costs of facilities that serve new development (typically defined as impact fees, capital recovery fees, capacity charges, etc.) are required to be conformed to HB 436 no later than July 1, 2018 in order to become valid. Fees that remain non-conforming after July 1, 2018 are considered unlawful and revenues collected are at risk to be refunded along with the possibility of associated legal penalties.

The Town of Beech Mountain retained McGill to review and make recommendations for revisions as necessary to conform water and sewer system SDFs with HB 436. The approach, methodology and calculations are based on American Water Works Association (AWWA) Manual of Water Supply Practices – M1, Principles of Water Rates, Fees, and Charges, Seventh Edition.

McGill is qualified in engineering disciplines and financial analysis and has the expertise and experience to determine system development fees. The firm has a long history of working with cities, towns, counties and special districts to provide professional advice on the setting of fees, the development of water and sewer master plans, capital improvement programs and the development of asset management plans.

Beech Mountain has made significant investments in its water and sewer system capital assets that provide capacity that is, and will be, available for new development. The town also desires to use System Development Fees to recover a portion of the costs associated with providing capacity.

The overall result of this effort will be establishing the maximum cost-justified System Development Fees allowable under HB 436. Beech Mountain may elect to implement fees of lesser value; however, any adjustment must be calculated on a cost per unit volume basis.

This report does not constitute a recommendation of any SDF amount. The Town Council has full authority to charge any amount, up to the maximum, provided it is applied to the relative demands of new development proportionally.

System Development Fees are defined as a charge imposed on each new customer or development that generally offsets the incremental cost of replacing existing and/or constructing new capital assets to provide capacity that will continue to meet the demands placed on the system by each new customer or development. Since water system capacity must, without exception, exceed customer demands, the major infrastructure components providing this capacity, such as water treatment plants, reservoirs, wells, pump stations, etc., must be planned and constructed well in advance and in large enough increments to keep pace with anticipated demand on the available system capacity.

AWWA methodology cites legal consideration for determining SDF. A Rational Nexus, or reasonable relationship, must be established between the fee charged and the cost associated with providing capacity to new customers. The Rational Nexus Test consists of three elements: 1) a review of available planning documents to verify general alignment between capacity demands driven by projected development patterns and planned capital improvements that will be needed to provide the required capacity; 2) a determination of the proportionate share of costs to be borne by new development through appropriate methodology and calculation and 3) establishing a reasonable apportionment of the cost to new development in relation to the benefits the new development will reasonably receive through appropriate methodology and calculations.

The first element of the Rational Nexus Test was determined to be favorable based on a review of the Town's 2013 Comprehensive Plan, existing water system available capacity, and capital improvements plan. The Comprehensive Plan anticipates a total population (permanent and seasonal) of 7,188 by 2030. By extending these projections through a 20-year planning period, the same annual rate of growth translates into a combined total population of 7,354 by 2040. Corresponding projections for water and sewer system demand and available capacities are presented as follows:

**Table 1.0.2 – Beech Mountain System Capacity Availability Projection (MGD)**

Beech Mountain System Capacity Availability Projection (MGD)				
Item	Existing Water and Sewer System Infrastructure	Year 2019	Year 2030	Year 2040
W1	Water Capacity	1.000	1.000	1.000
W2	Water Demand	0.419	0.539	0.676
	Available Water Capacity	0.581	0.461	0.324
S1	Sewer Capacity	0.530	0.530	0.530
S2	Sewer Demand	0.197	0.253	0.317
	Available Sewer Capacity	0.333	0.277	0.213

This table demonstrates that existing water and sewer systems are capable of providing sufficient capacity to address future demands; however, North Carolina Division of Water Resources has determined that the current source of water supply is unable to meet the 20-year safe yield capacity requirement. In response, the Town has programmed construction of a new surface water intake to add sufficient capacity in Fiscal Year 25 (FY25) of the Capital Improvements Plan (CIP).

Available capacity in the sewer system is dependent on the Grassy Gap Wastewater Treatment Plant which has exceeded its useful life and must therefore be replaced in order to preserve existing capacity. This project is programmed in FY26 and the portion of this project that is eligible for the system development fee is included in the calculation.

Planned capacity-related capital projects are in general alignment with projected capacity needs which demonstrates a rational nexus between the Comprehensive Plan's projection of development-driven demands and planned water and sewer capacity-related capital projects that will address these demand projections.

The remaining elements of the Rational Nexus Test are 2) determining proportionate share of costs to be borne by new development and 3) establishing a reasonable cost to new development in relation to the benefits received by the new development. These elements will be determined through appropriate methodology and calculations in the following sections.

Three methods for calculating SDF meet the definition of HB 436 and will satisfy the Rational Nexus Test:

#### **Buy-In Method**

The Buy-In Method is used where existing system capacity is available to provide service to new development. New customers essentially “buy” their proportionate share of system capacity from the current customer base (“system owners”) at the current cost or value of the existing facilities. HB 436 requires appropriate adjustments to be made to the replacement cost such as “debt credits, grants, and other generally accepted valuation adjustments.”

#### **Incremental Cost Method**

The Incremental Cost (or Marginal Cost) Method is used to assign new development the incremental cost of capital assets required for preserving and/or providing additional system capacity. This method should include supporting details that identify construction costs, scheduling, financing, funding source(s), etc., tied to a capital improvements plan (CIP), utilities master plan, and/or other approved planning document(s) that cover a planning horizon of 10 to 20 years. HB 436 requires a revenue credit to be applied “against the projected aggregate cost of water or sewer capital improvements.”

#### **Combined Method**

The Combined Approach is a combination of the Buy-In and Incremental Cost Methods. It is used where existing assets provide some system capacity to accommodate new development and applicable capital plan(s) also identify significant capital investment proposed to add infrastructure required to address future growth and capacity needs.

### 3.0

### CALCULATION of SYSTEM DEVELOPMENT FEES

The *Combined Method* is the appropriate approach to calculating Beech Mountain’s system development fees. Existing system capacity is available to provide service to new customers. Future capacity-related projects in the Capital Improvements Plan require incremental cost calculations. Therefore, calculating SDF will require the combined method.

#### 3.1 Existing System Capacity Availability

Water and sewer system design capacities are determined using average day demands and incorporate appropriate peaking factors and wet weather flows that will adequately address maximum flow conditions that occur during high water use and inflow/infiltration conditions. The water and sewer systems have current available capacities as follows:

**Table 3.1.1– Beech Mountain Water and Sewer Systems Available Capacity**

Beech Mountain Water and Sewer System Available Capacity (MGD)				
Item	System Capacity - Million Gallons Per Day (MGD)	Design Capacity	Average Day	Available Capacity
1	Water System	1.000	0.348	0.652
2	Sewer System	0.530	0.197	0.333

#### 3.2 Buy-In Calculation

**After demonstrating that capacity is available, the value per gallon is calculated to determine the cost per gallon that will be applied to reimburse existing customers for constructing and maintaining available capacity in advance.**

The preferred AWWA valuation approach is “replacement cost new less depreciation” (RCNLD). This approach is based on the premise that System Development Fees reflect the value of providing any given amount of new capacity at the cost of constructing the assets at the time the new customer is connected. This fairly compensates existing customers for carrying the costs of constructing and maintaining capacity built into the system in advance of when the new customers connect.

Replacement cost in the RCNLD calculation used the RS Means Historical Cost Index. RS Means has been publishing a construction cost index for over 70 years, collecting data from all facets of the industry to accurately track costs directly related to building and construction. This allows the present value (replacement cost new) of capital construction projects to be calculated on data provided by a very reliable, long-time industry leader. Depreciation assigned

by the Town’s fixed asset inventory uses the straight-line method, typically based on 10 to 50-year assignments of useful life for major capital assets, to represent a general decline in value over time.

Replacement Cost New (RCN) is therefore determined by applying the RS Means index to the original cost then deducting the accumulated depreciation to reach RCNLD.

Assets included in the buy-in valuation are those that provide the available capacity of the system, are “owned” by the ratepayers, and therefore provide a benefit to all customers. Typically, these assets are water supply, treatment, pump stations, storage, transmission and distribution mains, wastewater treatment, lift stations and collection systems. Assets contributed by or paid for by developers are deducted from the calculation since these costs were not “paid” by the existing customers. Non-capacity related assets such as vehicles, computers and software are also excluded from the calculation.

**Table 3.2.1– Water System Cost per GPD of Existing Utility Assets Providing Available Capacity**

Beech Mountain Water System Development Fee Buy-In Valuation				
Item	System Asset Description	RCNLD	Excluded	Amount Eligible
Water System Assets				
W1	Land	\$ 351,300	\$ -	\$ 351,300
W2	Water System Infrastructure	\$ 16,145,792	\$ 379,241	\$ 15,766,551
W3	Vehicles and Equipment	\$ 96,430	\$ 96,430	\$ -
Subtotal - Water System Assets		\$ 16,593,522	\$ 475,671	\$ 16,117,851
Less Revenue Credit: Outstanding Debt Principal				\$ (4,559,368)
Equals: Net Water System Value				\$ 11,558,483
Divide by: Water System Capacity (MGD)				1.00
Equals: Unit Valuation of Water System (\$/MGD)				\$ 11,558,483
Divide by: 1,000,000 gallons (\$/GPD)				\$ 11.56

**Table 3.2.2– Sewer System Cost per GPD of Existing Utility Assets Providing Available Capacity**

Beech Mountain Sewer System Development Fee Buy-In Valuation				
Item	System Asset Description	RCNLD	Excluded	Amount Eligible
	Sewer System Assets			
W1	Land	\$ 220,900	\$ -	\$ 220,900
W2	Sewer System Infrastructure	\$ 6,299,160	\$ -	\$ 6,299,160
W3	Vehicles and Equipment	\$ 96,430	\$ 96,430	\$ -
	Subtotal - Sewer Collection System Assets	\$ 6,616,490	\$ 96,430	\$ 6,520,060
	Less Revenue Credit: Outstanding Debt Principal			\$ (1,192,613)
	Equals: Net Sewer System Value			\$ 5,327,446
	Divide by: Sewer System Capacity (MGD)			0.530
	Equals: Unit Valuation of Sewer System (\$/MGD)			\$ 10,051,785
	Divide by: 1,000,000 gallons (\$/GPD)			\$ 10.05

**3.3 Incremental Cost Calculation**

**Value of future capacity to be available to new customers through capital construction projects considered in the Town’s Capital Improvements Plan (CIP) or similar master planning document.**

Assigning value to future capacity-related assets requires a determination of cost in present-day dollars and a clearly defined capacity that the assets will provide. Engineers typically assign project costs and capacity needs developed through a conceptual design process and adjust costs to the scheduled year of construction in the CIP. Present-day value can therefore be obtained using the same assumptions for inflation and then applied to the incremental cost calculation.

**Table 3.4.1 - Cost per GPD for Incremental (Future) Capacity Related Assets**

Beech Mountain Water System Development Fee Incremental Valuation				
CIP Item	System Asset Description	Cost	Capacity Related %	SDF Component Valuation
Water System Assets: New Construction				
WI 1	Watauga River Intake	\$ 19,104,837	100%	\$ 19,104,837
<b>Valuation Adjustments and Calculation of Cost-Justified Fee</b>				
	Less Revenue Credit: 25% project cost per HB436			\$ (4,776,209)
	Less Revenue Credit: Contributions from other sources			\$ (3,650,000)
	Equals: Adjusted Valuation			\$ 10,678,628
	Divided by: Capacity (MGD)			2.00
	Equals: Unit Valuation of Capacity (\$/MGD)			\$ 5,339,314
	Divided by: 1,000,000 gallons (\$/GPD)			\$ 5.34

**Table 3.4.2 - Cost per GPD for Incremental (Future) Capacity Related Assets**

Beech Mountain Sewer System Development Fee Incremental Valuation				
CIP Item	System Asset Description	Cost	Remaining Asset Value	SDF Component Valuation
Sewer System Assets: Replacement Construction				
SI 1	Grassy Gap WWTP Replacement	\$ 1,212,840	\$ -	\$ 1,212,840
<b>Valuation Adjustments and Calculation of Cost-Justified Fee</b>				
	Less Revenue Credit: 25% project cost per HB436			\$ (303,210)
	Equals: Adjusted Valuation			\$ 909,630
	Divided by: Capacity (MGD)			0.080
	Equals: Unit Valuation of Capacity (\$/MGD)			\$ 11,370,375
	Multiply: Available Capacity			0.035
	Equals: Unit Valuation of Available Capacity (\$/MGD)			\$ 397,963
	Divided by: 1,000,000 gallons (\$/GPD)			\$ 0.40

**3.5 Valuation Adjustments**

**The above system valuations include applicable credit adjustments for revenues anticipated from user charges, donated infrastructure, grants and funding from other (non-rate payer) sources.**

HB 436 requires revenue credits to be applied to existing debt that was issued to construct water and sewer system assets that provide capacity for potential customers and are repaid by

retail water rates and charges. To ensure that repayment for this debt is not collected twice from new customers; once through the SDF and again through retail rates and charges, the remaining outstanding debt principal amount is required to be applied as a credit against the projected aggregate cost of the capital improvements in the SDF calculation. Contributed capital provided by new development in excess of the development's proportionate share of connecting facilities, shall also be credited. Contributed capital is identified as part of fixed asset review and included in the summary of ineligible assets in the buy-in valuation calculation.

Revenue credits are also required to be applied to incremental (future) capacity-related assets. The present value of revenue generated by the approved rate structure over the course of the planning horizon (minimum 10 years, maximum 20 years) to repay future debt service is considered revenue credit and required to be excluded from the incremental valuation. The potential for existing rate structures to offset future capital needs was discussed with the Town. Staff concluded that water and sewer rates do not consider revenue generation specific to offsetting any incremental capacity costs and therefore revenue credits from this potential source are not applicable.

HB 436 assumes rate-generated revenues projected through the capital planning horizon will provide a minimum of 25% of the funding required to construct incremental assets. Therefore, a revenue credit of 25% is applied to the incremental valuation calculation.

### **3.6 Cost per Unit Volume**

**Dollar valued that can be applied uniformly to all potential customer.**

This measure becomes the starting point for determining the maximum cost-justified water system development fee. Fees for different types of customers are based on this cost of capacity multiplied by the amount of capacity needed to serve each type or class of customer.

#### **4.0 SERVICE UNIT CALCULATIONS: EQUIVALENT RESIDENTIAL UNITS**

HB 436 requires SDF calculations to be applied to various categories of customer demands based on service units or ERU's. An ERU is defined as the water and sewer capacities required to serve the most typical user type which is a three-bedroom single-family dwelling. North Carolina Division of Water Resources (DWR) design standards for constructing water and sewer systems, NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114 respectively, establish daily flow requirements based this type of service connection. An ERU can therefore be defined as 400 gallons per day for water and 360 gallons per day for sewer.

**Table 4.0.1– System Development Fees: Equivalent Residential Unit, Water and Sewer**

Beech Mountain System Development Fees: Equivalent Residential Unit Calculation				
Item	Cost-Justified System Development Fee Calculation	Capacity \$/ GPD	Demand GPD	Cost per Unit Capacity
1	Water System	\$ 16.90	400	\$ 6,760
2	Sewer System	\$ 10.45	360	\$ 3,761
	Total ERU			\$ 10,521

## **5.0 APPLICATION of SYSTEM DEVELOPMENT FEES and SERVICE UNIT EQUIVALENCY**

NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114, included in the Appendix, further define other service connection types and the associated water system demands sewer system flows on a per gallon per day basis. Therefore, these tables serve as an equivalency or conversion for use in determining applicable SDF for various categories of demand.

McGill has calculated costs for water system capacity on a per gallon per day basis for the Town of Beech Mountain. This calculation was performed using the Combined Method to account for the Town's combination of existing capacity, current improvements under construction and future capacity-related projects. This calculation resulted in a development fee ceiling of \$10,521 for an ERU. An ERU is defined as the water and sewer capacities required to serve the most typical user type which is a three-bedroom single-family dwelling. The fee for other types of development can be calculated by applying the calculated cost of capacity per gallon of flow per day to the water demands for various uses as defined by NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114.

Using NC Administrative Code 15A NCAC 18C .0409 and 15A NCAC 02T .0114 ensures that the same standard used to plan, design, construct and finance capital assets is applied as the same cost recovery basis to be applied to new development.

#### **Appendix**

House Bill 436

NC Administrative Code 15A NCAC 18C .0409

NC Administrative Code 15A NCAC 02T .0114

Revenue Credit: Outstanding Debt Principal

2013 Comprehensive Plan: Population Projection Section

2013 Comprehensive Plan: Water and Sewer Section

Beech Mountain Capital Improvements – Capacity Related Assets

RS Means Historical Cost Index

## APPENDIX

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GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2017

SESSION LAW 2017-138  
HOUSE BILL 436

AN ACT TO PROVIDE FOR UNIFORM AUTHORITY TO IMPLEMENT SYSTEM DEVELOPMENT FEES FOR PUBLIC WATER AND SEWER SYSTEMS IN NORTH CAROLINA AND TO CLARIFY THE APPLICABLE STATUTE OF LIMITATIONS.

The General Assembly of North Carolina enacts:

**SECTION 1.** Chapter 162A of the General Statutes is amended by adding a new Article to read:

"Article 8.  
"System Development Fees.

**"§ 162A-200. Short title.**

This Article shall be known and may be cited as the "Public Water and Sewer System Development Fee Act."

**"§ 162A-201. Definitions.**

The following definitions apply in this Article:

- (1) Capital improvement. – A planned facility or expansion of capacity of an existing facility other than a capital rehabilitation project necessitated by and attributable to new development.
- (2) Capital rehabilitation project. – Any repair, maintenance, modernization, upgrade, update, replacement, or correction of deficiencies of a facility, including any expansion or other undertaking to increase the preexisting level of service for existing development.
- (3) Existing development. – Land subdivisions, structures, and land uses in existence at the start of the written analysis process required by G.S. 162A-205, no more than one year prior to the adoption of a system development fee.
- (4) Facility. – A water supply, treatment, storage, or distribution facility, or a wastewater collection, treatment, or disposal facility, including for reuse or reclamation of water, owned or operated, or to be owned or operated, by a local governmental unit and land associated with such facility.
- (5) Local governmental unit. – Any political subdivision of the State that owns or operates a facility, including those owned or operated pursuant to local act of the General Assembly or pursuant to Part 2 of Article 2 of Chapter 130A, Article 15 of Chapter 153A, Article 16 of Chapter 160A, or Articles 1, 4, 5, 5A, or 6 of Chapter 162A of the General Statutes.
- (6) New development. – Any of the following occurring after the date a local government begins the written analysis process required by G.S. 162A-205, no more than one year prior to the adoption of a system development fee, which increases the capacity necessary to serve that development:
  - a. The subdivision of land.



- b. The construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure which increases the number of service units.
  - c. Any use or extension of the use of land which increases the number of service units.
- (7) Service. – Water or sewer service, or water and sewer service, provided by a local governmental unit.
- (8) Service unit. – A unit of measure, typically an equivalent residential unit, calculated in accordance with generally accepted engineering or planning standards.
- (9) System development fee. – A charge or assessment for service imposed with respect to new development to fund costs of capital improvements necessitated by and attributable to such new development, to recoup costs of existing facilities which serve such new development, or a combination of those costs, as provided in this Article. The term includes amortized charges, lump-sum charges, and any other fee that functions as described by this definition regardless of terminology. The term does not include any of the following:
- a. A charge or fee to pay the administrative, plan review, or inspection costs associated with permits required for development.
  - b. Tap or hookup charges for the purpose of reimbursing the local governmental unit for the actual cost of connecting the service unit to the system.
  - c. Availability charges.
  - d. Dedication of capital improvements on-site, adjacent, or ancillary to a development absent a written agreement providing for credit or reimbursement to the developer pursuant to G.S. 153A-280, 153A-451, 160A-320, 160A-499 or Part 3A of Article 18, Chapter 153A or Part 3D of Article 19, Chapter 160A of the General Statutes.
  - e. Reimbursement to the local governmental unit for its expenses in constructing or providing for water or sewer utility capital improvements adjacent or ancillary to the development if the owner or developer has agreed to be financially responsible for such expenses; however, such reimbursement shall be credited to any system development fee charged as set forth in G.S. 162A-207(c).
- (10) System development fee analysis. – An analysis meeting the requirements of G.S. 162A-205.

**"§ 162A-202. Reserved.**

**"§ 162A-203. Authorization of system development fee.**

(a) A local governmental unit may adopt a system development fee for water or sewer service only in accordance with the conditions and limitations of this Article.

(b) A system development fee adopted by a local governmental unit under any lawful authority other than this Article and in effect on October 1, 2017, shall be conformed to the requirements of this Article not later than July 1, 2018.

**"§ 162A-204. Reserved.**

**"§ 162A-205. Supporting analysis.**

A system development fee shall be calculated based on a written analysis, which may constitute or be included in a capital improvements plan, that:

- (1) Is prepared by a financial professional or a licensed professional engineer qualified by experience and training or education to employ generally accepted accounting, engineering, and planning methodologies to calculate system development fees for public water and sewer systems.
- (2) Documents in reasonable detail the facts and data used in the analysis and their sufficiency and reliability.
- (3) Employs generally accepted accounting, engineering, and planning methodologies, including the buy-in, incremental cost or marginal cost, and combined cost methods for each service, setting forth appropriate analysis as to the consideration and selection of a method appropriate to the circumstances and adapted as necessary to satisfy all requirements of this Article.
- (4) Documents and demonstrates the reliable application of the methodologies to the facts and data, including all reasoning, analysis, and interim calculations underlying each identifiable component of the system development fee and the aggregate thereof.
- (5) Identifies all assumptions and limiting conditions affecting the analysis and demonstrates that they do not materially undermine the reliability of conclusions reached.
- (6) Calculates a final system development fee per service unit of new development and includes an equivalency or conversion table for use in determining the fees applicable for various categories of demand.
- (7) Covers a planning horizon of not less than 10 years nor more than 20 years.
- (8) Is adopted by resolution or ordinance of the local governmental unit in accordance with G.S. 162A-209.

**"§ 162A-206. Reserved.**

**"§ 162A-207. Minimum requirements.**

(a) Maximum. – A system development fee shall not exceed that calculated based on the system development fee analysis.

(b) Revenue Credit. – In applying the incremental cost or marginal cost, or the combined cost, method to calculate a system development fee with respect to water or sewer capital improvements, the system development fee analysis must include as part of that methodology a credit against the projected aggregate cost of water or sewer capital improvements. That credit shall be determined based upon generally accepted calculations and shall reflect a deduction of either the outstanding debt principal or the present value of projected water and sewer revenues received by the local governmental unit for the capital improvements necessitated by and attributable to such new development, anticipated over the course of the planning horizon. In no case shall the credit be less than twenty-five percent (25%) of the aggregate cost of capital improvements.

(c) Construction or Contributions Credit. – In calculating the system development fee with respect to new development, the local governmental unit shall credit the value of costs in excess of the development's proportionate share of connecting facilities required to be oversized for use of others outside of the development. No credit shall be applied, however, for water or sewer capital improvements on-site or to connect new development to water or sewer facilities.

**"§ 162A-208. Reserved.**

**"§ 162A-209. Adoption and periodic review.**

(a) For not less than 45 days prior to considering the adoption of a system development fee analysis, the local governmental unit shall post the analysis on its Web site and solicit and furnish a means to submit written comments, which shall be considered by the preparer of the analysis for possible modifications or revisions.

(b) After expiration of the period for posting, the governing body of the local governmental unit shall conduct a public hearing prior to considering adoption of the analysis with any modifications or revisions.

(c) The local governmental unit shall publish the system development fee in its annual budget or rate plan or ordinance. The local governmental unit shall update the system development fee analysis at least every five years.

**"§ 162A-210. Reserved.**

**"§ 162A-211. Use and administration of revenue.**

(a) Revenue from system development fees calculated using the incremental cost method or marginal cost method, exclusively or as part of the combined cost method, shall be expended only to pay:

(1) Costs of constructing capital improvements including, and limited to, any of the following:

a. Construction contract prices.

b. Surveying and engineering fees.

c. Land acquisition cost.

d. Principal and interest on bonds, notes, or other obligations issued by or on behalf of the local governmental unit to finance any costs for an item listed in sub-subdivisions a. through c. of this subdivision.

(2) Professional fees incurred by the local governmental unit for preparation of the system development fee analysis.

(3) If no capital improvements are planned for construction within five years or the foregoing costs are otherwise paid or provided for, then principal and interest on bonds, notes, or other obligations issued by or on behalf of a local governmental unit to finance the construction or acquisition of existing capital improvements.

(b) Revenue from system development fees calculated using the buy-in method may be expended for previously completed capital improvements for which capacity exists and for capital rehabilitation projects. The basis for the buy-in calculation for previously completed capital improvements shall be determined by using a generally accepted method of valuing the actual or replacement costs of the capital improvement for which the buy-in fee is being collected less depreciation, debt credits, grants, and other generally accepted valuation adjustments.

(c) A local governmental unit may pledge a system development fee as security for the payment of debt service on a bond, note, or other obligation subject to compliance with the foregoing limitations.

(d) System development fee revenues shall be accounted for by means of a capital reserve fund established pursuant to Part 2 of Article 3 of Chapter 159 of the General Statutes and limited as to expenditure of funds in accordance with this section.

**"§ 162A-212. Reserved.**

**"§ 162A-213. Time for collection of system development fees.**

For new development involving the subdivision of land, the system development fee shall be collected by a local governmental unit either at the time of plat recordation or when water or sewer service for the subdivision or other development is committed by the local governmental unit. For all other new development, the local governmental unit shall collect the system development fee at the time of application for connection of the individual unit of development to the service or facilities.

**"§ 162A-214. Reserved.**

**"§ 162A-215. Narrow construction.**

Notwithstanding G.S. 153A-4 and G.S. 160A-4, in any judicial action interpreting this Article, all powers conferred by this Article shall be narrowly construed to ensure that system development fees do not unduly burden new development."

**SECTION 2.** G.S. 130A-64 reads as rewritten:

**"§ 130A-64. Service charges and rates.**

(a) A sanitary district board shall apply service charges and rates based upon the exact benefits derived. These service charges and rates shall be sufficient to provide funds for the maintenance, adequate depreciation and operation of the work of the district. If reasonable, the service charges and rates may include an amount sufficient to pay the principal and interest maturing on the outstanding bonds and, to the extent not otherwise provided for, bond anticipation notes of the district. Any surplus from operating revenues shall be set aside as a separate fund to be applied to the payment of interest on or to the retirement of bonds or bond anticipation notes. The sanitary district board may modify and adjust these service charges and rates.

(b) The district board may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes."

**SECTION 3.** G.S. 153A-277 reads as rewritten:

**"§ 153A-277. Authority to fix and enforce rates.**

(a) A county may establish and revise from time to time schedules of rents, rates, fees, charges, and penalties for the use of or the services furnished or to be furnished by a public enterprise. Schedules of rents, rates, fees, charges, and penalties may vary for the same class of service in different areas of the county and may vary according to classes of service, and different schedules may be adopted for services provided outside of the county. A county may include a fee relating to subsurface discharge wastewater management systems and services on the property tax bill for the real property where the system for which the fee is imposed is located.

...

(a2) A county may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes.

...."

**SECTION 4.(a)** G.S. 160A-314 reads as rewritten:

**"§ 160A-314. Authority to fix and enforce rates.**

(a) A city may establish and revise from time to time schedules of rents, rates, fees, charges, and penalties for the use of or the services furnished or to be furnished by any public enterprise. Schedules of rents, rates, fees, charges, and penalties may vary according to classes of service, and different schedules may be adopted for services provided outside the corporate limits of the city.

...

(e) A city may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes."

**SECTION 4.(b)** G.S. 160A-317 is amended by adding a new subsection to read:

**"(a4) System Development Fees. – A city may require system development fees only in accordance with Article 8 of Chapter 162A of the General Statutes."**

**SECTION 5.(a)** G.S. 162A-6(a) is amended by adding a new subdivision to read:

**"(9a) To impose and require system development fees only in accordance with Article 8 of this Chapter."**

**SECTION 5.(b)** G.S. 162A-9 is amended by adding a new subsection to read:

**"(a5) An authority may require system development fees only in accordance with Article 8 of this Chapter."**

**SECTION 6.(a)** G.S. 162A-36(a) is amended by adding a new subdivision to read:

"(8a) To impose and require system development fees only in accordance with Article 8 of this Chapter."

**SECTION 6.(b)** G.S. 162A-49 reads as rewritten:

**"§ 162A-49. Rates and charges for services.**

(a) The district board may fix, and may revise from time to time, rents, rates, fees and other charges for the use of land for the services furnished or to be furnished by any water system or sewerage system or both. Such rents, rates, fees and charges shall not be subject to supervision or regulation by any bureau, board, commission, or other agency of the State or of any political subdivision. Any such rents, rates, fees and charges pledged to the payment of revenue bonds of the district shall be fixed and revised so that the revenues of the water system or sewerage system or both, together with any other available funds, shall be sufficient at all times to pay the cost of maintaining, repairing and operating the water system or the sewerage system or both, the revenues of which are pledged to the payment of such revenue bonds, including reserves for such purposes, and to pay the interest on and the principal of such revenue bonds as the same shall become due and payable and to provide reserves therefor. If any such rents, rates, fees and charges are pledged to the payment of any general obligation bonds issued under this Article, such rents, rates, fees and charges shall be fixed and revised so as to comply with the requirements of such pledge. The district board may provide methods for collection of such rents, rates, fees and charges and measures for enforcement of collection thereof, including penalties and the denial or discontinuance of service.

(b) The district board may require system development fees only in accordance with Article 8 of this Chapter."

**SECTION 7.(a)** G.S. 162A-69 is amended by adding a new subdivision to read:

"(8a) To impose and require system development fees only in accordance with Article 8 of this Chapter."

**SECTION 7.(b)** G.S. 162A-72 reads as rewritten:

**"§ 162A-72. Rates and charges for services.**

(a) The district board may fix, and may revise from time to time, rents, rates, fees and other charges for the use of and for the services furnished or to be furnished by any sewerage system. Such rents, rates, fees and charges shall not be subject to supervision or regulation by any bureau, board, commission, or other agency of the State or of any political subdivision. Any such rents, rates, fees and charges pledged to the payment of revenue bonds of the district shall be fixed and revised so that the revenues of the sewerage system, together with any other available funds, shall be sufficient at all times to pay the cost of maintaining, repairing and operating the sewerage system the revenues of which are pledged to the payment of such revenue bonds, including reserves for such purposes, and to pay the interest on and the principal of such revenue bonds as the same shall become due and payable and to provide reserves therefor. If any such rents, rates, fees and charges are pledged to the payment of any general obligation bonds issued under this Article, such rents, rates, fees and charges shall be fixed and revised so as to comply with the requirements of such pledge. The district board may provide methods for collection of such rents, rates, fees and charges and measures for enforcement of collection thereof, including penalties and the denial or discontinuance of service.

(b) The district board may require system development fees only in accordance with Article 8 of this Chapter."

**SECTION 8.** G.S. 162A-85.13 is amended by adding a new subsection to read:

"(a1) The district board may require system development fees only in accordance with Article 8 of this Chapter."

**SECTION 9.** G.S. 162A-88 reads as rewritten:

**"§ 162A-88. District is a municipal corporation.**

(a) The inhabitants of a county water and sewer district created pursuant to this Article are a body corporate and politic by the name specified by the board of commissioners. Under that name they are vested with all the property and rights of property belonging to the corporation; have perpetual succession; may sue and be sued; may contract and be contracted with; may acquire and hold any property, real and personal, devised, sold, or in any manner conveyed, dedicated to, or otherwise acquired by them, and from time to time may hold, invest, sell, or dispose of the same; may have a common seal and alter and renew it at will; may establish, revise and collect rates, fees or other charges and penalties for the use of or the services furnished or to be furnished by any sanitary sewer system, water system or sanitary sewer and water system of the district; and may exercise those powers conferred on them by this Article.

(b) The district board may require system development fees only in accordance with Article 8 of this Chapter."

**SECTION 10.(a)** G.S. 1-52(15) reads as rewritten:

"(15) For the recovery of taxes paid as provided in ~~G.S. 105-381~~G.S. 105-381 or for the recovery of an unlawful fee, charge, or exaction collected by a county, municipality, or other unit of local government for water or sewer service or water and sewer service."

**SECTION 10.(b)** This section is to clarify and not alter G.S. 1-52.

**SECTION 11.** Sections 1 through 9 of this act become effective October 1, 2017, and apply to system development fees imposed on or after that date. Section 10 of this act, being a clarifying amendment, has retroactive effect and applies to claims accrued or pending prior to and after the date that section becomes law. Nothing in this act provides retroactive authority for any system development fee, or any similar fee for water or sewer services to be furnished, collected by a local governmental unit prior to October 1, 2017. The remainder of this act is effective when it becomes law and applies to claims accrued or pending prior to and after that date.

In the General Assembly read three times and ratified this the 29<sup>th</sup> day of June, 2017.

s/ Daniel J. Forest  
President of the Senate

s/ Tim Moore  
Speaker of the House of Representatives

s/ Roy Cooper  
Governor

Approved 4:13 p.m. this 20<sup>th</sup> day of July, 2017

**15A NCAC 18C .0409 SERVICE CONNECTIONS**

(a) Local Water Supply Plan. Units of local government which are operating under a local water supply plan in accordance with G.S. 143-355(l) shall not be limited in the number of service connections.

(b) No local water supply plan. A public water system which does not have a local water supply plan as stated in Paragraph (a) shall limit its number of service connections as follows:

- (1) A public water system shall meet the daily flow requirements specified in Table 1:

Table 1: Daily Flow Requirements

Type of Service Connection	Daily Flow for Design
Residential	400 gallon/connection
Mobile Home Parks	250 gallon/connection
Campgrounds and Travel Trailer Parks	100 gallon/space
Marina	10 gallon/boat slip
Marina with bathhouse	30 gallon/boat slip
Rest Homes and Nursing Homes	
with laundry	120 gallon/bed
without laundry	60 gallon/bed
Schools	15 gallon/student
Day Care Facilities	15 gallon/student
Construction, work, or summer camps	60 gallon/person
Business, office, factory (exclusive of industrial use)	
without showers	25 gallon/person/shift
with showers	35 gallon/person/shift
Hospitals	300 gallon/bed

or;

- (2) A public water system serving different types of service connections shall meet the maximum daily demand calculated as follows:
  - (A) Where records of the previous year are available that reflect daily usage, the average of the two highest consecutive days of record of the water treated shall be the value used to determine if there is capacity to serve additional service connections (unusual events such as massive line breaks or line flushings shall not be considered).
  - (B) Where complete daily records of water treated are not available, the public water system shall multiply the daily average use based on the amount of water treated during the previous year of record by the appropriate factor to determine maximum daily demand, as follows:
    - (i) A system serving a population of 10,000 or less shall multiply the daily average use by 2.5; or
    - (ii) A system serving a population greater than 10,000 shall multiply the daily average use by 2.0.

*History Note: Authority G.S. 130A-315; 103A-317; P.L. 93-523; Eff. July 1, 1994.*

**15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES**

(a) This Rule shall be used to determine wastewater flow rates for all systems covered by this Subchapter unless alternate criteria are provided by a program specific rule and for flow used for the purposes of 15A NCAC 02H .0105. These are minimum design daily flow rates for normal use and occupancy situations. Higher flow rates may be required where usage and occupancy are atypical, including, those in Paragraph (e) of this Rule. Wastewater flow calculations must take hours of operation and anticipated maximum occupancies/usage into account when calculating peak flows for design.

(b) In determining the volume of sewage from dwelling units, the flow rate shall be 120 gallons per day per bedroom. The minimum volume of sewage from each dwelling unit shall be 240 gallons per day and each additional bedroom above two bedrooms shall increase the volume by 120 gallons per day. Each bedroom or any other room or addition that can reasonably be expected to function as a bedroom shall be considered a bedroom for design purposes. When the occupancy of a dwelling unit exceeds two persons per bedroom, the volume of sewage shall be determined by the maximum occupancy at a rate of 60 gallons per person per day.

(c) The following table shall be used to determine the minimum allowable design daily flow of wastewater facilities. Design flow rates for establishments not identified below shall be determined using available flow data, water-using fixtures, occupancy or operation patterns, and other measured data.

Type of Establishments	Daily Flow For Design
Barber and beauty shops	
Barber Shops	50 gal/chair
Beauty Shops	125 gal/booth or bowl
Businesses, offices and factories	
General business and office facilities	25 gal/employee/shift
Factories, excluding industrial waste	25 gal/employee/shift
Factories or businesses with showers or food preparation	35 gal/employee/shift
Warehouse	100 gal/loading bay
Warehouse – self storage (not including caretaker residence)	1 gal/unit
Churches	
Churches without kitchens, day care or camps	3 gal/seat
Churches with kitchen	5 gal/seat
Churches providing day care or camps	25 gal/person (child & employee)
Fire, rescue and emergency response facilities	
Fire or rescue stations without on site staff	25 gal/person
Fire or rescue stations with on-site staff	50 gal/person/shift
Food and drink facilities	
Banquet, dining hall	30 gal/seat
Bars, cocktail lounges	20 gal/seat
Caterers	50 gal/100 sq ft floor space
Restaurant, full Service	40 gal/seat
Restaurant, single service articles	20 gal/seat
Restaurant, drive-in	50 gal/car space
Restaurant, carry out only	50 gal/100 sq ft floor space
Institutions, dining halls	5 gal/meal
Deli	40 gal/100 sq ft floor space
Bakery	10 gal/100 sq ft floor space
Meat department, butcher shop or fish market	75 gal/100 sq ft floor space
Specialty food stand or kiosk	50 gal/100 sq ft floor space
Hotels and Motels	
Hotels, motels and bed & breakfast facilities, without in-room cooking facilities	120 gal/room
Hotels and motels, with in-room cooking facilities	175 gal/room
Resort hotels	200 gal/room
Cottages, cabins	200 gal/unit
Self service laundry facilities	500 gal/machine
Medical, dental, veterinary facilities	
Medical or dental offices	250 gal/practitioner/shift

Veterinary offices (not including boarding)	250 gal/practitioner/shift
Veterinary hospitals, kennels, animal boarding facilities	20 gal/pen, cage, kennel or stall
Hospitals, medical	300 gal/bed
Hospitals, mental	150 gal/bed
Convalescent, nursing, rest homes without laundry facilities	60 gal/bed
Convalescent, nursing, rest homes with laundry facilities	120 gal/bed
Residential care facilities	60 gal/person
Parks, recreation, camp grounds, R-V parks and other outdoor activity facilities	
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite
Campgrounds with water and sewer hookups	100 gal/campsite
Campground dump station facility	50 gal/space
Construction, hunting or work camps with flush toilets	60 gal/person
Construction, hunting or work camps with chemical or portable toilets	40 gal/person
Parks with restroom facilities	250 gal/plumbing fixture
Summer camps without food preparation or laundry facilities	30 gal/person
Summer camps with food preparation and laundry facilities	60 gal/person
Swimming pools, bathhouses and spas	10 gal/person
Public access restrooms	325 gal/plumbing fixture
Schools, preschools and day care	
Day care and preschool facilities	25 gal/person (child & employee)
Schools with cafeteria, gym and showers	15 gal/student
Schools with cafeteria	12 gal/student
Schools without cafeteria, gym or showers	10 gal/student
Boarding schools	60 gal/person (student & employee)
Service stations, car wash facilities	
Service stations, gas stations	250 gal/plumbing fixture
Car wash facilities (if recycling water see Rule .0235)	1200 gal/bay
Sports centers	
Bowling center	50 gal/lane
Fitness, exercise, karate or dance center	50 gal/100 sq ft
Tennis, racquet ball	50 gal/court
Gymnasium	50 gal/100 sq ft
Golf course with only minimal food service	250 gal/plumbing fixture
Country clubs	60 gal/member or patron
Mini golf, putt-putt	250 gal/plumbing fixture
Go-kart, motocross	250 gal/plumbing fixture
Batting cages, driving ranges	250 gal/plumbing fixture
Marinas without bathhouse	10 gal/slip
Marinas with bathhouse	30 gal/slip
Video game arcades, pool halls	250 gal/plumbing fixture
Stadiums, auditoriums, theaters, community centers	5 gal/seat
Stores, shopping centers, malls and flea markets	
Auto, boat, recreational vehicle dealerships/showrooms with restrooms	125 gal/plumbing fixture
Convenience stores, with food preparation	60 gal/100 sq ft
Convenience stores, without food preparation	250 gal/plumbing fixture
Flea markets	30 gal/stall
Shopping centers and malls with food service	130 gal/1000 sq ft
Stores and shopping centers without food service	100 gal/1000 sq ft
Transportation terminals – air, bus, train, ferry, port and dock	5 gal/passenger

(d) Design daily flow rates for proposed non-residential developments where the types of use and occupancy are not known shall be designed for a minimum of 880 gallons per acre or the applicant shall specify an anticipated flow based upon anticipated or potential uses.

(e) Conditions applicable to the use of the above design daily flow rates:

- (1) For restaurants, convenience stores, service stations and public access restroom facilities, higher design daily flow rates shall be required based on higher expected usage where use is increased because of its proximity to highways, malls, beaches, or other similar high use areas.
- (2) Residential property on barrier islands and similar communities located south or east of the Atlantic Intracoastal Waterway used as vacation rental as defined in G.S. 42A-4 shall use 120 gallons per day per habitable room. Habitable room shall mean a room or enclosed floor space used or intended to be used for living or sleeping, excluding kitchens and dining areas, bathrooms, shower rooms, water closet compartments, laundries, pantries, foyers, connecting corridors, closets, and storage spaces.

(f) An adjusted daily sewage flow design rate shall be granted for permitted but not yet tributary connections and future connections tributary to the system upon showing that a sewage system is adequate to meet actual daily wastewater flows from a facility included in Paragraph (b) or (c) of this Rule without causing flow violations at the receiving wastewater treatment plant or capacity related sanitary sewer overflows within the collection system as follows:

- (1) Documented, representative data from that facility or a comparable facility shall be submitted by an authorized signing official in accordance with Rule .0106 of this Section to the Division as follows for all flow reduction request:
  - (A) Dates of flow meter calibrations during the time frame evaluated and indication if any adjustments were necessary.
  - (B) A breakdown of the type of connections (e.g. two bedroom units, three bedroom units) and number of customers for each month of submitted data as applicable. Identification of any non-residential connections including subdivision clubhouses/pools, restaurants, schools, churches and businesses. For each non-residential connection, information as identified in Paragraph (c) of this Rule (e.g. 200 seat church, 40 seat restaurant, 35 person pool bathhouse).
  - (C) Owner of the collection system.
  - (D) Age of the collection system.
  - (E) Analysis of inflow and infiltration within the collection system or receiving treatment plant, as applicable.
  - (F) Where a dedicated wastewater treatment plant serves the specific area and is representative of the residential wastewater usage, at least the 12 most recent consecutive monthly average wastewater flow readings and the daily total wastewater flow readings for the highest average wastewater flow month per customers as reported to the Division.
  - (G) Where daily data from a wastewater treatment plant cannot be utilized or is not representative of the project area: at least 12 months worth of monthly average wastewater flows from the receiving treatment plant shall be evaluated to determine the peak sewage month. Daily wastewater flows shall then be taken from a flow meter installed at the most downstream point of the collection area for the peak month selected that is representative of the project area. Justification for the selected placement of the flow meter shall also be provided.
  - (H) An estimated minimum design daily sewage flow rate shall be taken by calculating the numerical average of the top three daily readings for the highest average flow month. The calculations shall also account for seasonal variations, excessive inflow and infiltration, age and suspected meter reading/recording errors.
- (2) The Division shall evaluate all data submitted but shall also consider other factors in granting, with or without adjustment, or denying a flow reduction request including: applicable weather conditions during the data period (i.e. rainy or drought), other historical monitoring data for the particular facility or other similar facilities available to the Division, the general accuracy of monitoring reports and flow meter readings, and facility usage (i.e., resort area).
- (3) Flow increases shall be required if the calculations in Subparagraph (f)(1) of this Rule yield design flows higher than that specified in Paragraphs (b) or (c) of this Rule.
- (4) The applicant/owner shall retain the letter of any approved adjusted daily design flow rate for the life of the facility and shall transfer such letter to any new system owner.

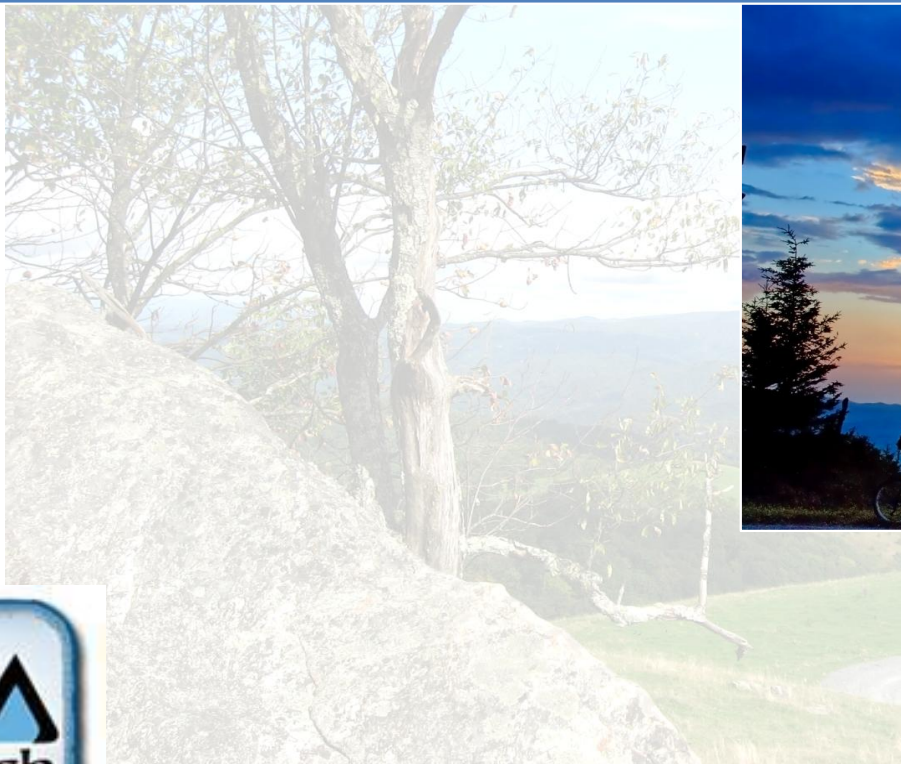
*History Note:* Authority G.S. 143-215.1; 143-215.3(a)(1);  
Eff. September 1, 2006.

**TOWN OF BEECH MOUNTAIN  
DEBT SERVICE SCHEDULE AND REVENUE CREDIT TOTALS  
WATER AND SEWER FUND:**

YEAR	1,992,046 DENR 2.265% STATE REVOLVING LOAN 7/30/07 POND CREEK WW PLANT			2011 950,000 BB&T 3.11% LEASE/PURCHASE RADIO READ WATER METER PROJECT			988,110 BB&T 3.71% WATER LINE & GENERATORS LEASE/PURCHASE			4,300,000 USDA 3.375% REVENUE BONDS WATER TREAT PLANT			95,004 BB&T 2.19% May-17 Backhoe			TOTAL DEBT PAYMENTS WATER & SEWER	
	PRINCIPAL	INTEREST	TOTAL	PRINC	INTEREST	TOTAL	PRINCIPAL	INTEREST	TOTAL	PRINCIPAL	INTEREST	TOTAL	PRINCIPAL	INTEREST	TOTAL		
2018/2019	99,602	22,560	122,162	102,218	9,050	111,268	115,777	4,295	120,073	54,000	143,336	197,336	18,585	1,682	20,267	571,106	
2019/2020	99,602	20,304	119,906	105,421	5,847	111,268				56,000	141,514	197,514	18,992	1,275	20,267	448,955	
2020/2021	99,602	18,048	117,650	108,725	2,543	111,268				58,000	139,624	197,624	19,408	859	20,267	446,809	
2021/2022	99,602	15,792	115,394							60,000	137,666	197,666	19,832	434	20,267	333,327	
2022/2023	99,602	13,536	113,138							62,000	135,641	197,641				310,780	
2023/2024	99,602	11,280	110,882							64,000	133,549	197,549				308,431	
2024/2025	99,602	9,024	108,626							66,000	131,389	197,389				306,015	
2025/2026	99,602	6,768	106,370							68,000	129,161	197,161				303,532	
2026/2027	99,602	4,512	104,114							71,000	126,866	197,866				301,981	
2027/2028	99,602	2,256	101,858							73,000	124,470	197,470				299,328	
2028/2056										3,615,000	1,518,632	5,133,632				5,133,632	
TOTAL	996,023	124,080	1,120,103	316,364	17,440	333,804	115,777	4,295	120,073	4,247,000	2,861,848	7,108,848	76,817	4,250	81,068	8,763,895	
	INTEREST DUE MAY 1 AND NOV 1 PRINC DUE MAY 1			PRINC & INTEREST DUE OCT 15 & APR 15			PRINCIPAL & INTEREST DUE EACH OCTOBER 22.						Total Debt Interest Total Debt Principal			3,011,913 5,751,981	
													Revenue Credit Totals			Water System Outstanding Debt Principal Sewer System Outstanding Debt Principal	4,559,368 1,192,613

**2013-2030**

# Beech Mountain Comprehensive Plan



A Comprehensive Plan for the Future Growth and  
Development of the  
Town of Beech Mountain, North Carolina  
2013-2030



# Town of Beech Mountain Comprehensive Plan

Beech Mountain, North Carolina

*Prepared for the citizens and stakeholders of Beech Mountain*

**Elected Officials:**

**Beech Mountain Town Council**

Rick Owen, Mayor  
Paul Piquet, Vice Mayor  
Cindy Keller  
Alan Holcombe  
Rick Miller

Randy Feierabend, Town Manager

**Prepared by:**

**Beech Mountain Planning Board**

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Kevin Lewis, Planning Intern

*Cover photo Credit: Kristian Jackson*



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Chapter 13– Plan Implementation (p.162)

REFERENCES (Available at Beech Mountain Town Hall)

Reference A– Capital Improvement/ Capital Facilities Plan

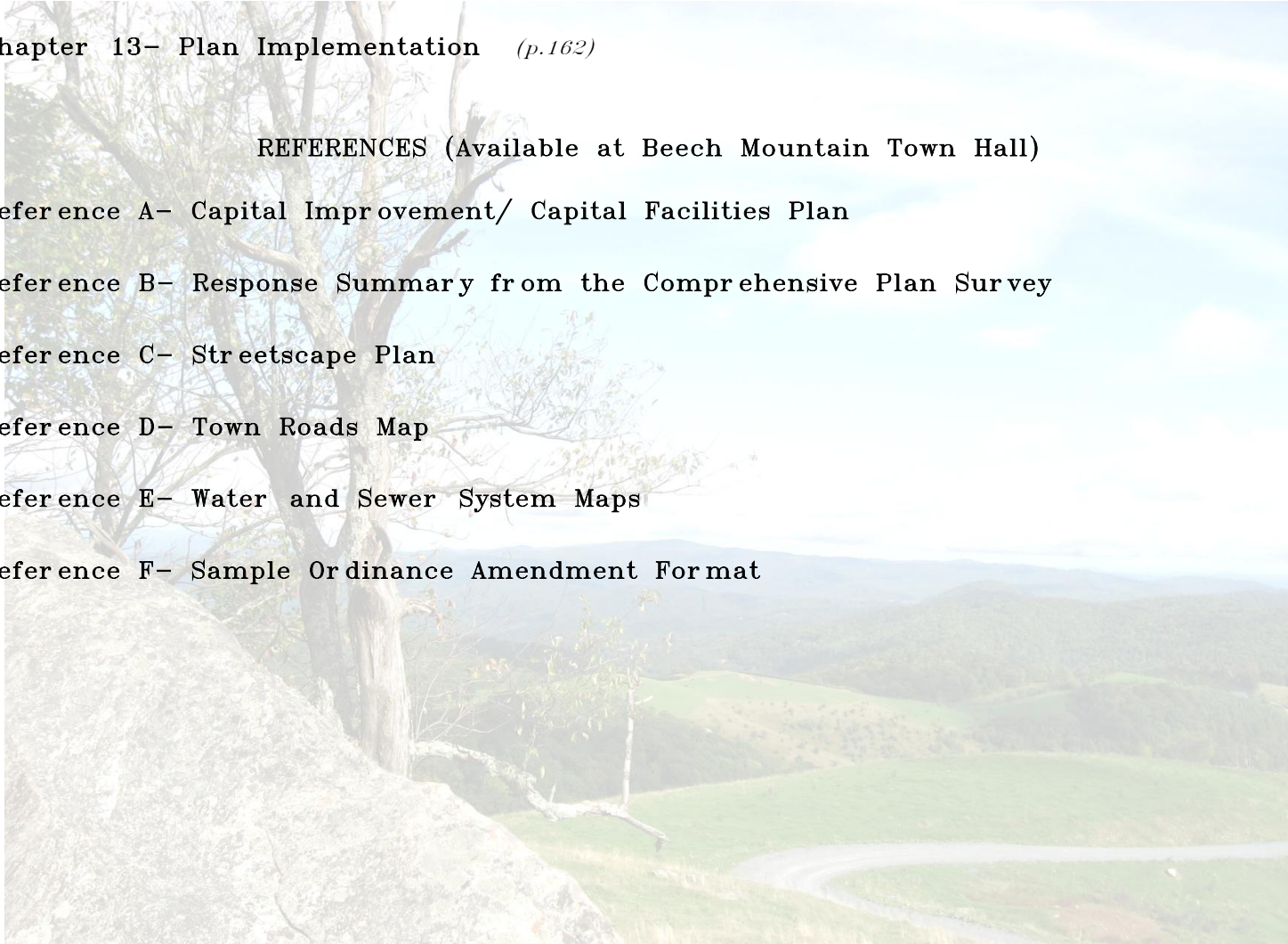
Reference B– Response Summary from the Comprehensive Plan Survey

Reference C– Streetscape Plan

Reference D– Town Roads Map

Reference E– Water and Sewer System Maps

Reference F– Sample Ordinance Amendment Format

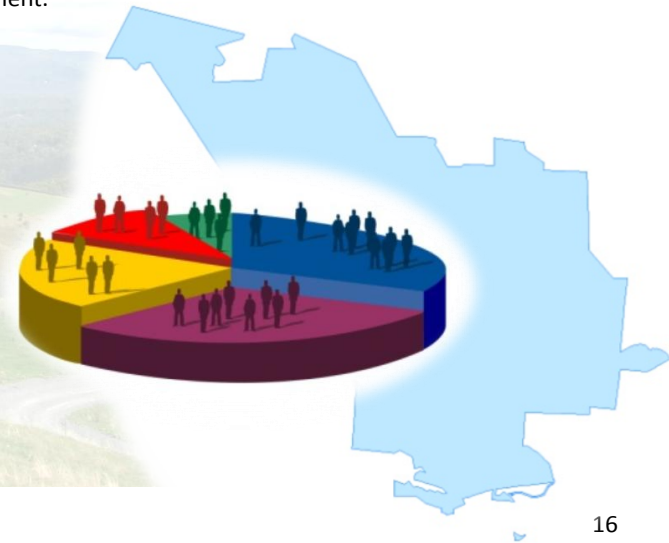


## Demographics

To plan for the future of Beech Mountain, it is critical to know about the Town's population. First and foremost is the straightforward question of growth. How much growth will the Town see? How many people will we have to accommodate? But other questions about our population also carry great weight. What kinds of people make Beech Mountain their home or vacation destination? What kind of housing, recreation, and employment choices do they make? It is important to understand who our population is and how their characteristics will change over the coming decades. The answers to questions such as these will set the background for our Town's plans for the future.

More than just a mechanism to support planning for growth, demographics are also important to consider because *many of the decisions that the Town makes, consciously or unconsciously, can make a drastic impact on the level of growth that the town will see in the future.* It is important to remember that other scenarios than those presented are possible. By planning to increase density the town could experience levels of growth even greater than in the build-out scenario. By concentrating that density in specific

locations and modifying land use controls to allow for compact development, such density could theoretically be achieved without compromising open spaces and environmental characteristics. On the other hand, the Town could drastically limit growth by imposing more severe land usage restrictions and regulations as an alternative means to protecting the town's character and environment.





## Current Population Statistics (Baseline Figures)

The figures below provide a snapshot of basic and critical current population figures for Beech Mountain:

**345** - Number of full time residents (2010 US Census)

**Approximately 4500** - Estimated number of seasonal or second home residents (Beech Mtn. est. based on 2.24 persons per housing unit)

**2287** - Number of Housing Units (2010 US Census)

- For seasonal , recreational, occasional use: **2049**
- Full time occupied: **154**

**5418** - Number of Parcels of Land (2011 Avery and Watauga County Tax Data)

## Demographic Projections for Beech Mountain

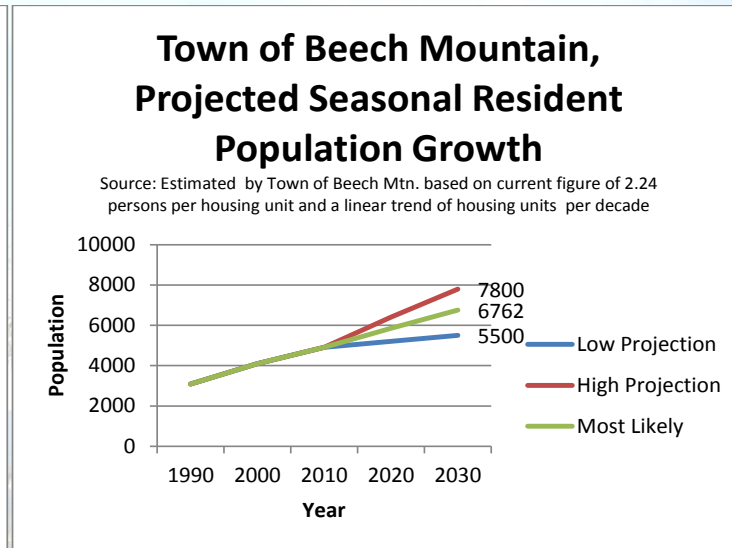
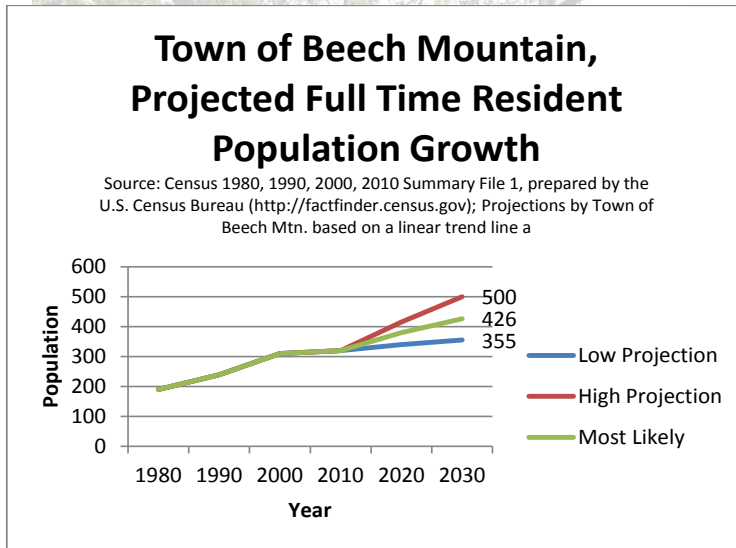
As a vacation resort community, Beech Mountain has relatively few full time residents. But full time residents only portray a fraction of the picture of Beech Mountain's true population. Beech Mountain's unique situation as a resort community demands that demographic trends for Beech Mountain be analyzed in different ways and that different factors be taken into account. Because Census figures focus on year-round residents, analyzing housing and building trends is one method of accounting for the fact that the majority of homes on Beech Mountain are second homes or vacation homes.

For purposes of forecasting growth, two factors are focused upon in this analysis:

- Population and its contributing factors
- Construction trends

## Projected Growth Scenario

This scenario forecasts as closely as possible the growth that Beech Mountain will encounter over the coming decades. It takes into account current growth rates and projects them into the future. The following charts illustrate that ***Beech Mountain will likely have approximately 425 full time and nearly 7000 part time residents by 2030.***



Many factors were considered in developing these estimates, and these considerations will likely determine whether the actual population change over this period errs towards high-growth or low-growth projection. Considerations support a conclusion that steady, robust growth will resume in Beech Mountain in the future include:

- Retirement age baby boomers (people born between 1946-1964). Much of the land and housing in Beech Mountain is owned by people who are planning to one day “retire to the mountains”
- Rise in number of independently wealthy individuals

- Advent of internet and telecommuting allows individuals to live where they desire, rather than being tied to a work location
- Continued growth in nearby major cities (Charlotte, Piedmont Triad, Tri- Cities, Triangle) and in the State of North Carolina as a whole
- Land and Housing competitively priced for the High Country area of North Carolina

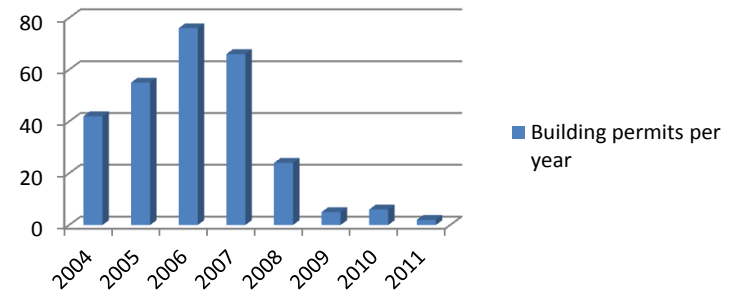
However, there are several factors and trends that will serve to limit Beech Mountain's population growth in the future, including:

- The baby boomer generation has already peaked. The average baby boomer has passed retirement age.
- The national and global economic slowdown that began in 2008 has severely curtailed growth in the near term.
- Aging of current population. The age structure of Beech Mountain's residents is very top-heavy, meaning there is a disproportionate number of individuals at the high end of the age spectrum, without a sufficient number of persons in younger age categories to replace them.

One of the largest factors to consider in this analysis is the long-term impact of the current economic recession. Although recent figures show a sharp decline in the construction of new homes, it is reasonable to predict that the overall growth trend will continue in the future. Even with the recent downturn in the economy and its related impacts on construction, the decade of 2000-2010 taken as a whole echoed the pattern of growth that the Town has experienced since its inception. The first chart below illustrates the sharp curtain in construction at the latter half of the 2000's, but the

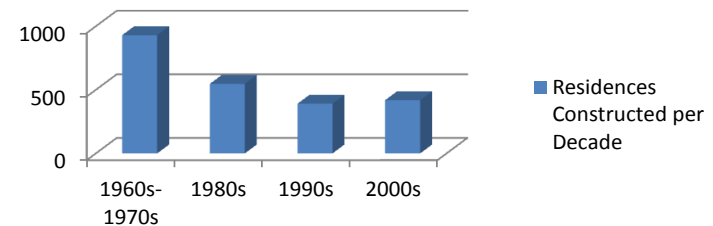
second chart documents the overall high and consistent level of development that has occurred here over the last 40 years.

### Building Permits for New Residential Units- 2004- 2011



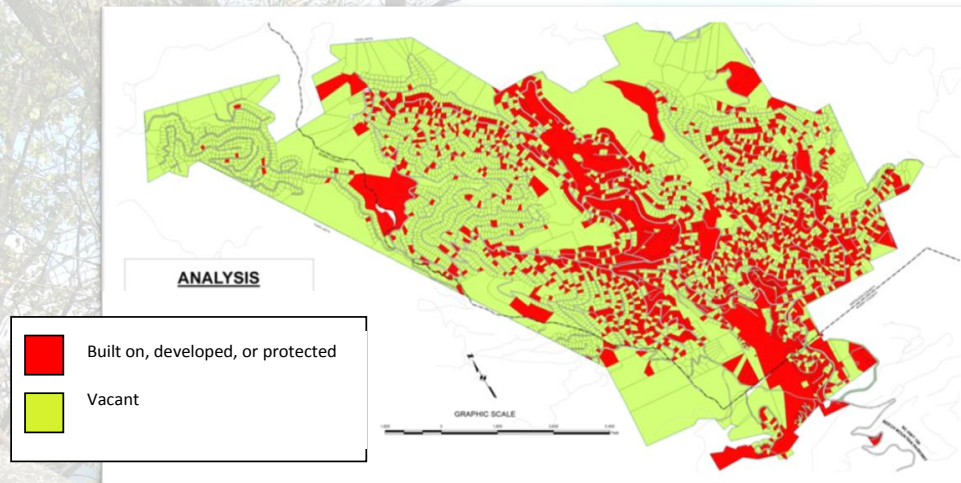
### Residences Constructed per Decade

Source: Data for 1990's and 2000's- U.S. Census Bureau 1990, 2000, and 2010. Data for 1980's imputed from estimated 23.9% of occupied housing being from 1980's according to 2005-2009 American Community Survey. Remainder



## Build-Out Scenario

Another way to forecast demands that will be placed on infrastructure in Beech Mountain is to plan for complete build – out of existing buildable lots. Because the town originated as a planned development, Beech Mountain has the unique characteristic of having almost all of its land already subdivided and its growth is ultimately constrained by limited space and a limited number of buildable, subdivided lots.



Although the prospect of occupying all of Beech Mountain's buildable lots is distant, it is nevertheless feasible in a long-term plan. Once all lots have been built upon, population will increase more slowly, and will only occur with increases in density.

As of 2010, there were 5434 lots in the Town of Beech Mountain, 1754 of which are built upon, or roughly 32%. Assuming that 85% of the remaining 3680 lots are eventually buildable, and assuming single family residences will be the predominant land use, **there is potential for at least 3128 new homes in the Town of Beech Mountain**, which is 137% of the current number.

**With 3128 new housing units in Beech Mountain, the population figures would be as follows:**

- **5415 total housing units**
- **Approximate seasonal population of 12,129** (calculated using current average of 2.24 persons per housing unit)
- **Approximate year round population of 815** (calculated using the current ratio of .15 year round residents per housing unit)



## CHAPTER EIGHT WATER & SEWER

### WS: Background

### WS: Current Water System Infrastructure Map and Data

### WS.G: Water and Sewer Goals, Policies and Strategies

**Goal WS.G1:** Adequate Water and Sewer Capacity for our Town's Future

**WS.G1.S1:** Look for alternate sources of raw water

**WS.G1.P1:** Promote conservation

**WS.G1.S2:** Replace undersized water lines

**WS.G1.S3:** Expand capacity of water and sewer treatment facilities

**Goal WS.G2:** Superior Water Quality

**WS.G1.P1:** Protect the Town's watersheds and watercourses

**WS.G2.S1:** Where feasible, utilize BMP's to better manage stormwater

**WS.G2.S2:** Update and modernize the Water Treatment Plant

**WS.G2.S3:** Increase circulation in the water system

**WS.G2.S4:** Systematically and incrementally replace water and sewer line infrastructure

**Goal WS.G3:** Efficiency in the Delivery of Services

**WS.G3.P1:** Reduce amount of water unaccounted for

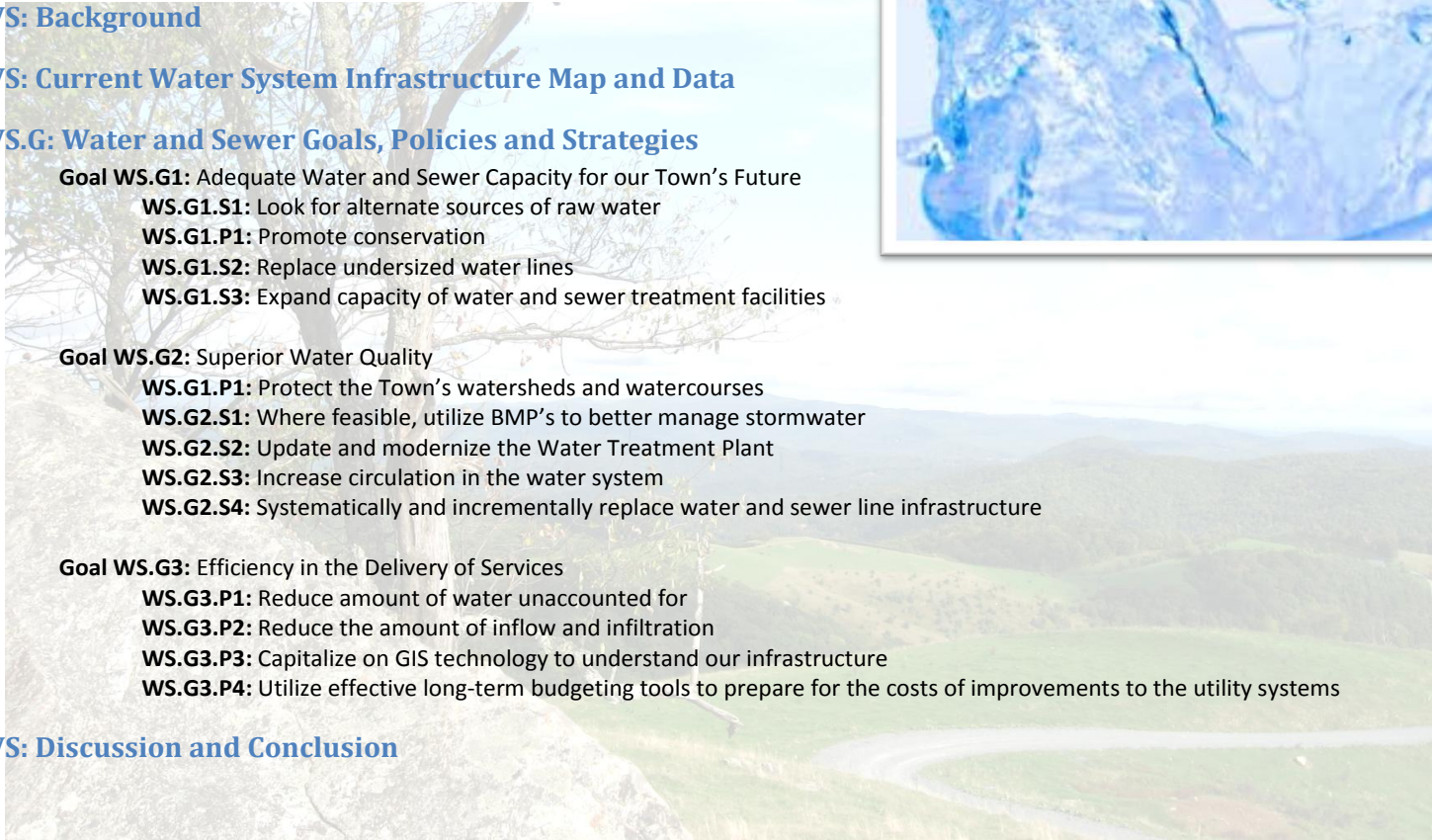
**WS.G3.P2:** Reduce the amount of inflow and infiltration

**WS.G3.P3:** Capitalize on GIS technology to understand our infrastructure

**WS.G3.P4:** Utilize effective long-term budgeting tools to prepare for the costs of improvements to the utility systems



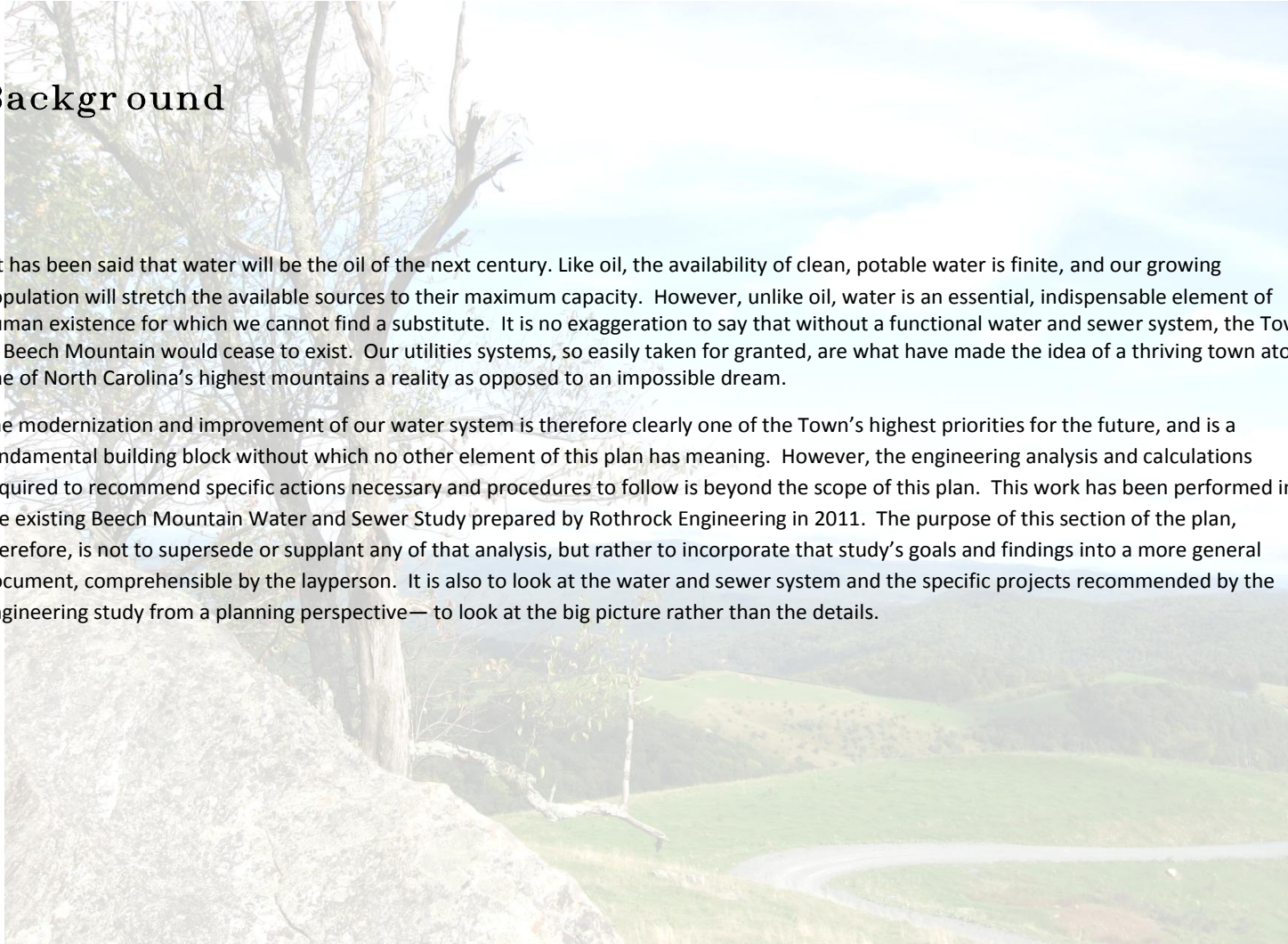
### WS: Discussion and Conclusion



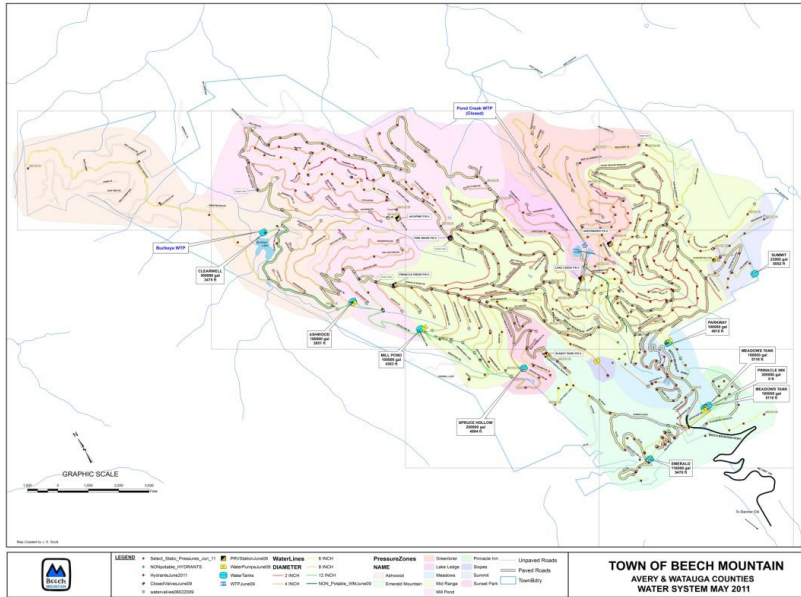
## Background

It has been said that water will be the oil of the next century. Like oil, the availability of clean, potable water is finite, and our growing population will stretch the available sources to their maximum capacity. However, unlike oil, water is an essential, indispensable element of human existence for which we cannot find a substitute. It is no exaggeration to say that without a functional water and sewer system, the Town of Beech Mountain would cease to exist. Our utilities systems, so easily taken for granted, are what have made the idea of a thriving town atop one of North Carolina's highest mountains a reality as opposed to an impossible dream.

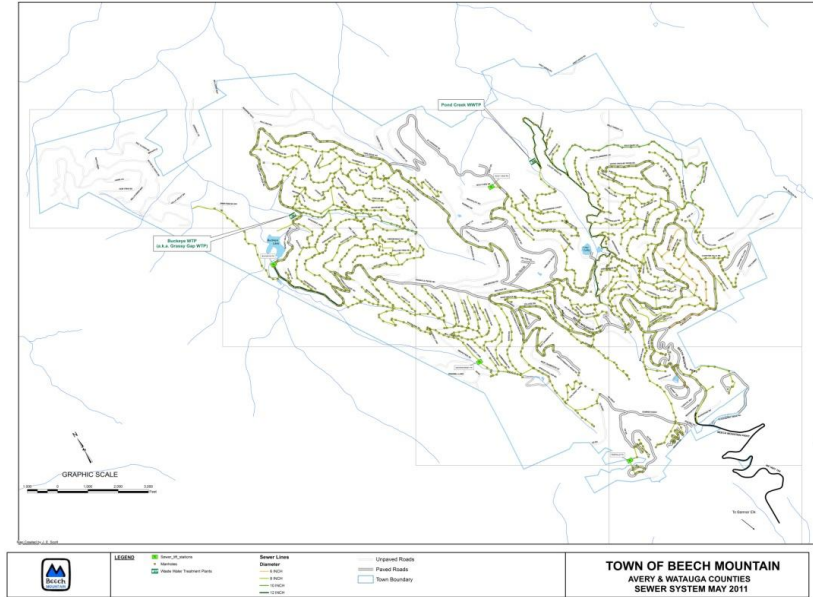
The modernization and improvement of our water system is therefore clearly one of the Town's highest priorities for the future, and is a fundamental building block without which no other element of this plan has meaning. However, the engineering analysis and calculations required to recommend specific actions necessary and procedures to follow is beyond the scope of this plan. This work has been performed in the existing Beech Mountain Water and Sewer Study prepared by Rothrock Engineering in 2011. The purpose of this section of the plan, therefore, is not to supersede or supplant any of that analysis, but rather to incorporate that study's goals and findings into a more general document, comprehensible by the layperson. It is also to look at the water and sewer system and the specific projects recommended by the engineering study from a planning perspective— to look at the big picture rather than the details.



# Beech Mountain Water and Sewer Systems



Water System



Sewer System

See Reference E for larger maps.

## System Statistics

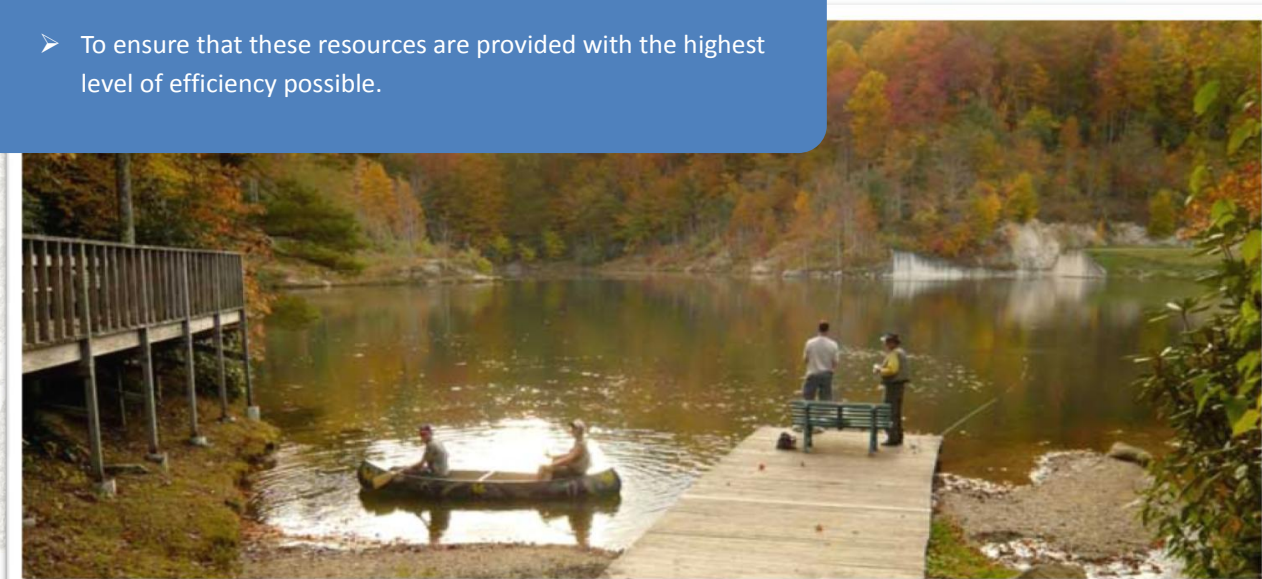
- 68.5 MILES OF WATER LINE/ 55.16 MILES OF SEWER LINE
- 333 HYDRANTS
- 9 WATER TANKS
- ESTIMATED 500+ VALVES
- APPROX. 1700 MANHOLES
- 6 MAJOR WATER PUMP STATIONS/ 4 SEWER LIFT STATIONS

## Water and Sewer: Goals, Objectives

### & Recommended Strategies and Policies

**T**he Town's goals in the area of providing for these basic necessities are simple and straightforward:

- To provide Capacity for water and sewer that will be adequate for our Town's future,
- To ensure that the quality of these resources is high, and
- To ensure that these resources are provided with the highest level of efficiency possible.



Buckeye Lake Water Level- July 30, 2010



Buckeye Lake Water Level- July 30, 2010



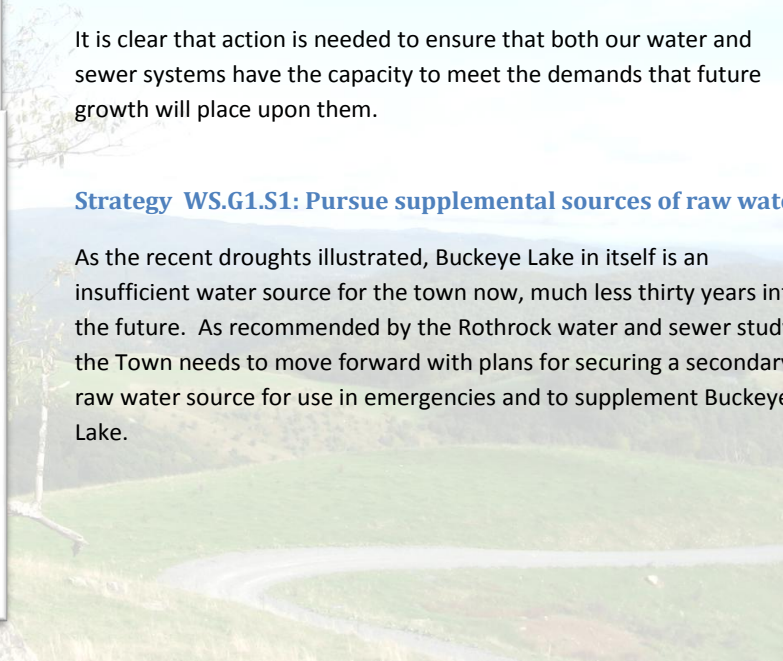
## Goal WS1: Adequate Water and Sewer Capacity for our Town's Future

Buckeye Lake Reservoir has three levels of water intakes, at 6 ½ feet , 13 ½ feet, and 23 ½ feet below full pond. During a moderate drought in the Summer of 2010, water level at its lowest was a mere 18" above the bottom intake. This amounted to a water supply reserve of less than 20 days at the current rates of withdrawal. This experience made obvious the peril that a similar or worse drought could impose, especially when considered in light of potential increases in demand in coming years.

It is clear that action is needed to ensure that both our water and sewer systems have the capacity to meet the demands that future growth will place upon them.

### Strategy WS.G1.S1: Pursue supplemental sources of raw water

As the recent droughts illustrated, Buckeye Lake in itself is an insufficient water source for the town now, much less thirty years into the future. As recommended by the Rothrock water and sewer study, the Town needs to move forward with plans for securing a secondary raw water source for use in emergencies and to supplement Buckeye Lake.



### **Policy WS.G1.P1: Promote conservation**

Another way to ensure that our water and sewer capacities are adequate is to conserve and be more judicious in our use of resources.

➤ **Continue and strengthen our mandatory conservation measures during drought**

○ Better education regarding conservation practices, better dissemination of conservation requirements, and better enforcement of requirements are three ways to help the system be more effective.

➤ **Billing structure**

○ Ensure that the Town's billing structure remains organized in such a way that conservation is rewarded and overuse is penalized.

➤ **Other conservation methods**

○ The town could also take measures to encourage environmental conservation practices. We can promote and encourage the use of water conservation technology such as rain barrels, low flush volume toilets, and low volume shower heads. To encourage the use of these items during construction, the Town could leverage building permit fee reductions.

### **Strategy WS.G1.S2: Replace undersized waterlines**

The adequacy of water issue can also be approached from a fire fighting and public safety context. The town has several areas where

the primary water lines are 2 inches in diameter. Modern practices no longer use 2 inch water pipe for utility applications because they generally do not provide ideal flow rates for fire fighting.

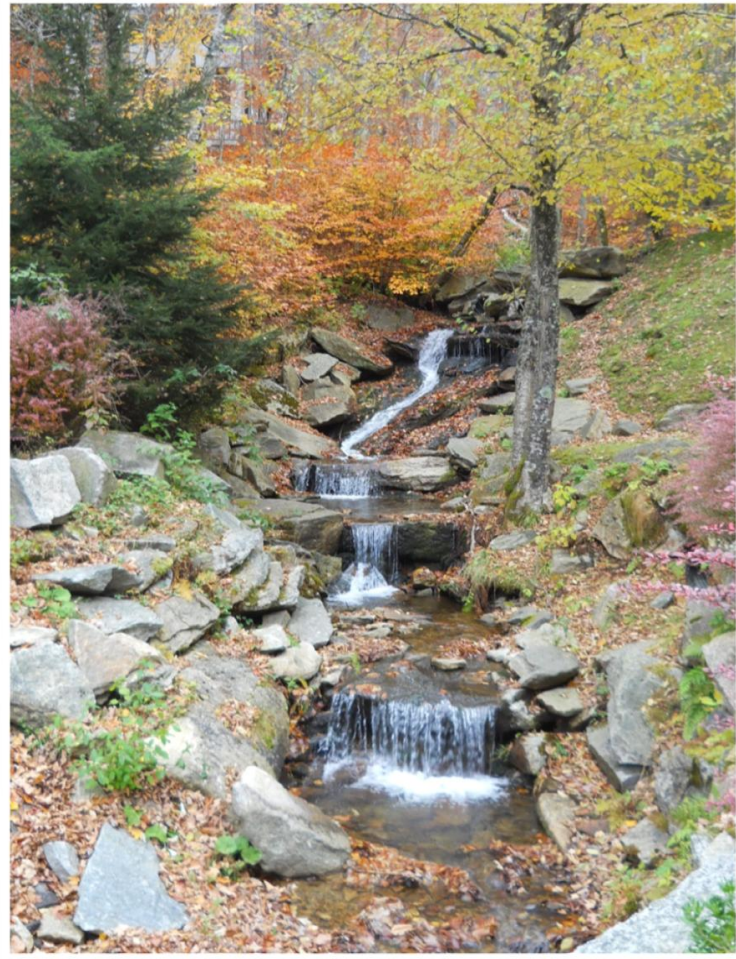
As the town pursues strategies of replacing its water lines these lines should receive weighted priority.

### **Strategy WS.G1.S3: Expand Capacity of Water and Sewer Treatment Plants**

Finally, expanding the capacity of our water and sewer treatment facilities will be a major step towards ensuring our services are adequate to meet needs.

A June 2009 study predicted that the water plant's demand would exceed capacity in 2012. While that has not yet occurred, it is still clear that additional capacity must be developed. The 2011 Rothrock study offered three alternatives for developing water plant capacity that included two methods for refitting the existing plant and building an entire new plant. Regardless of which alternative the Town chooses, it is clear that they must move ahead with plans and preparations to increase plant capacity in some manner.

Likewise, the Grassy Gap Waste Water Treatment Plant will exceed its useful life expectancy in 2024 and when replaced should be sized to meet future demand.



## Goal WS.G2: Superior Water Quality

It is the goal of the town to provide water that is as pristine as our mountain surroundings.

### Policy WS.G2.P1: Protect the Town's watersheds and watercourses

One of the best ways to improve the town's water quality is to protect and improve the quality of the water before it even enters the system. This method requires the least amount of construction and infrastructure costs and also benefits wildlife and the environment.

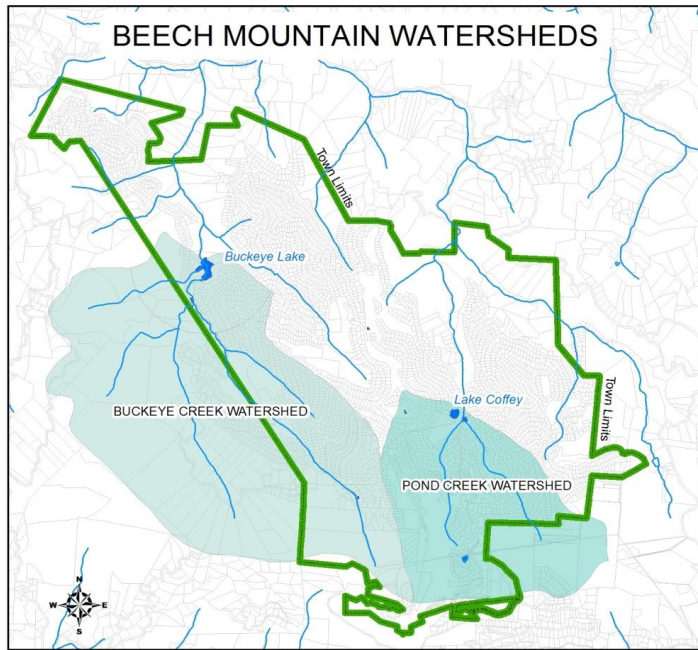
One method of protecting our streams and lakes is through enforcement of the town's watershed protection program as mandated by the North Carolina Department of Environment and Natural Resources. Under this program, there are various watershed classifications within the Town, and sets of rules apply to each based upon the proximity to the reservoir.

Within the Watershed Overlay Districts, land use is intended to remain undeveloped. Single Family uses are intended to be limited to one per acre (in the WS-II districts) and one per two acres (in the WS-II C district). All other uses are to be limited to a maximum of 6%- 12% built upon area.

Although at first glance this program seems highly restrictive, there is one large exception that makes it have relatively low impact within Beech Mountain's town limits. This exception is that platted lots existing at the time of the enactment of the watershed laws (1993) are exempt from the regulations if used for single family purposes. Almost all of the area within the Town of Beech Mountain that lies in a

watershed district was divided into platted lots prior to 1993 and is zoned for single family usage. However, a large percentage of the watersheds lie outside the town's jurisdiction, and these areas contain the largest amount developable land to which the Watershed Act's regulations would apply. Although these areas are not within the town's regulatory purview, the Town should be vigilant to ensure that standards are upheld in these outlying areas that directly affect the Town's water source.

Another benefit of the watershed rules to the town is that they also grant the town the more general power to prohibit any activities, situations, or structures that pose a threat to water quality, such as inadequate on-site sewage systems or improper disposal of garbage or junk.



The town also enforces state laws regarding setbacks and buffers from streams. Currently our ordinances specify that, "no new development activities may occur within 30' of a perennial watercourse indicated on the most recent versions of USGS 1:24,000 (7.5 minute) scale topographic maps or as determined by Town of Beech Mountain studies." There are actually few "perennial" watercourses within the town, because at our high elevation we are at the source waters for streams, and our watercourses tend to have flows that are often seasonal or intermittent. Beech Mountain should, as the ordinance stipulates, undertake our own studies to determine more accurately which streams actually do make a large influence on our water quality and need to be protected.

A final way of protecting our water sources is to identify areas of significant erosion or other pollution and to undertake streambank or shoreline stabilization and restoration. The town should conduct studies to determine if there are any areas here that would benefit from these processes.

**Policy WS.G2.P2: Where feasible, the Town should utilize Best Management Practices (BMP's) to better manage Stormwater**

One of the most significant sources of pollution in water sources comes directly from the stormwater that washes into them from our streets, parking lots, and other impervious surfaces.

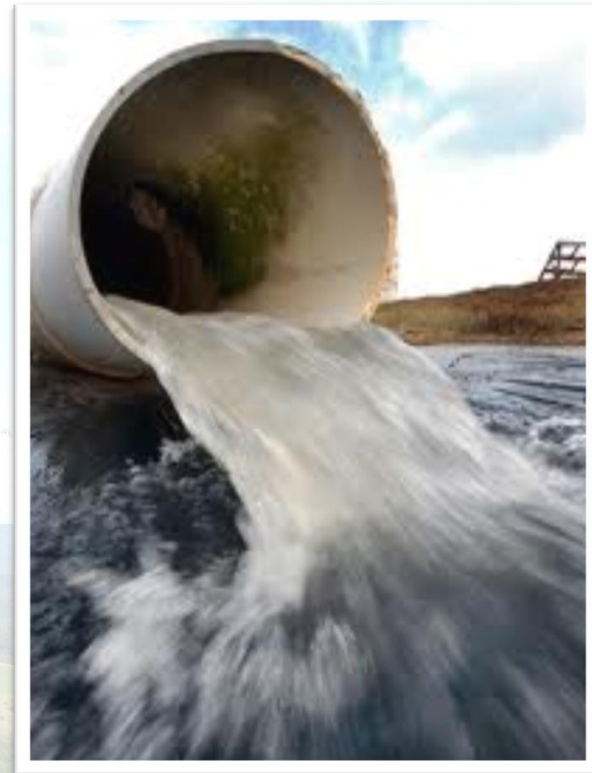
In 2007 the town received a Clean Water Management Trust Fund grant to perform a stormwater inventory and basin study for the town. The study did not extend to the entire town but was confined to a specific identified target area with known stormwater issues.

Products of the study included a GIS database of stormwater data and recommendations to retrofit several sites with Best Management Practices. The study recognized that in improved stormwater management there was potential to significantly enhance the water quality of our streams.

It is recommended that future work expand the scope of this study to include more of the Town. It is also recommended that the town seek sources of funding to implement some of the study's other recommendations, including upsizing several conveyances and culverts, and possibly constructing a stormwater wetland.

#### **Strategy WS.G2.S1: Update and modernize the Water Treatment Plant**

The Buckeye Water Treatment Plant is in need of replacement. In addition to the adequacy to handle projected demand as mentioned above, it also is facing problems with age and deterioration. It went on line in 1986—25 years ago. The expected useful life of “package” water treatment plants of this type is generally 20-25 years. The Rothrock study identified several areas of deterioration that were bordering on becoming emergency issues (later investigation proved that the problems were not as severe as they could have been). The age and deterioration issues with the plant make it difficult to treat water as well as possible. When the plant is replaced, the use of newer technology and better operating equipment will help in ensuring a high level of water quality.



➤ **Strategy WS.G2.P2: Increase circulation of water in the system**

Potentially the greatest obstacle to the quality of water that has already been treated and is in our system is stagnation. Beech Mountain faces special problems with stagnation because of the seasonal nature of our population and the expansive size and spread-out nature of our system. The Rothrock study investigated this issue and found the average water ages in our various water tanks in the chart to the right.

Several approaches have been proposed to solve this problem:

- The town is locating motorized devices into our water tanks to circulate the water within them. The first of these has already been installed and is an important step towards water quality.
- Look for opportunities to connect or reconfigure water lines to encourage circulation rather than stagnation. Water systems that “loop” and connect are better for circulation than water systems in a tree-like layout that have many dead ends. Beech Mountain’s system does have many dead ends that could be addressed by adding sections of water line to make connections.

# Water Quality

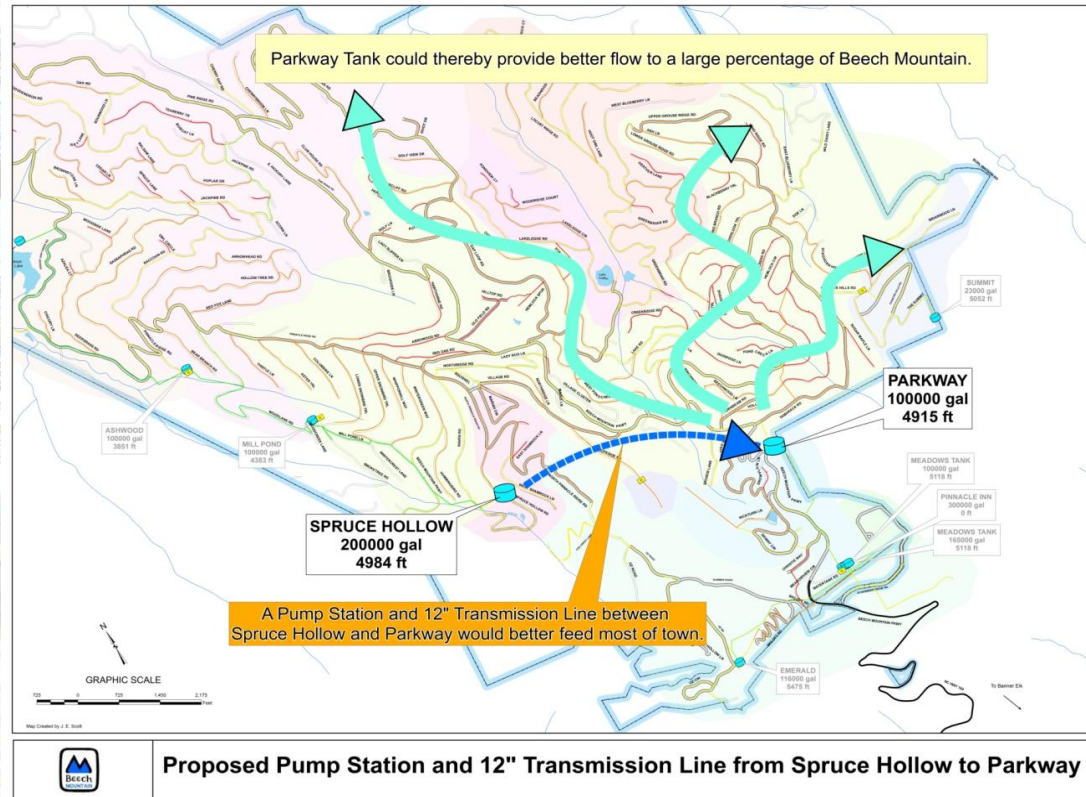
## Problems With Water Age

Location	Days Water Is In Tank
Pinnacle Inn	32.6
The Summit	17.8
Emerald Mountain	17.1
The Meadows II	7.9
The Meadows I	7.1
Parkway	<2
Spruce Hollow	<2
Mill Pond	<2
Ashwood	<2

- The Rothrock study identified the need for a large diameter connection and pump station between the Spruce Hollow and Parkway water tanks to allow better cross-flow between various pressure zones- thereby increasing circulation system-wide. (see diagram below).
- The Rothrock study also recommended replacement and upgrades at several of our older booster pump locations in order to better pump water through the system.

**Strategy WS.G2.S3: Systematically and incrementally work toward the replacement of the town's entire water line and sewer line infrastructure.**

It is difficult to get clean water out of a rusty, dirty old pipe. Our aging network of water and sewer lines bring problems with efficiency and quality as well as the issues with water leakage and flow rate mentioned above. It should be a long term goal of the town to work toward the eventual replacement of all of the water and sewer pipes in our system. This far reaching goal should be approached piece by piece, little by little, in a systematic fashion wherein the situations identified as worst are replaced first. The Rothrock study laid out the steps to take in this regard.



**Proposed Pump Station and 12" Transmission Line from Spruce Hollow to Parkway**

## Goal WS.G3: Efficiency in the Delivery of Services

The Town not only needs to provide utility services of adequate quantity and high quality, but it needs to do so in a manner that is economically efficient.

### Strategy WS.G3.P1: Reduce amount of Water Unaccounted For

The Rothrock Water and Sewer Study revealed a staggering amount of water unaccounted for in the Beech Mountain Utilities System. In 2010, the Town treated 119,663,000 gallons of water, but only billed for 39,631,000 gallons. That means roughly 67% of the water that was pumped into our system was unaccounted for. Fixing this problem may be one of the most important steps towards ensuring our water supply system is adequate for the future, but it is also one of the most difficult problems to fix.

The study found that the unaccounted-for water is mostly the result of *systematic* leaks that exist system wide. In other words, this is not a matter of simply locating and fixing a few major leaks, but rather it is the result of the accumulation of hundreds or even thousands of small leaks throughout the entire system. The water system is becoming quite aged- being originally constructed in the 1960s- and it is estimated that at least some leakage is present at nearly every tap and coupling.

It was also estimated that one of the largest sources of this problem was not actually water loss at all, but rather inaccurate or non-functioning water meters. The town has already taken a major step towards correcting this by undertaking a major project of replacing

every meter in the town with new “radio read” meters in 2011. Early results have shown a significantly improved accountability for water use.

### Strategy WS.G3.P2: Reduce amount of Inflow and Infiltration

Mirroring the problem of unaccounted- for water, *inflow and infiltration* are major obstacles to our sewer system being able to handle and process the amount of sewage it receives. Inflow and infiltration is the problem of water seepage into the sewer system, increasing the volume of water that must be treated at the town’s plants.



Many manholes inspected during the water and sewer study showed severe disrepair and age, while it was evident that many others were of substandard construction in the first place. Many manholes had gaping holes in their sidewalls or were lacking any semblance of a seal at the connection between the manhole and the pipe entrance.

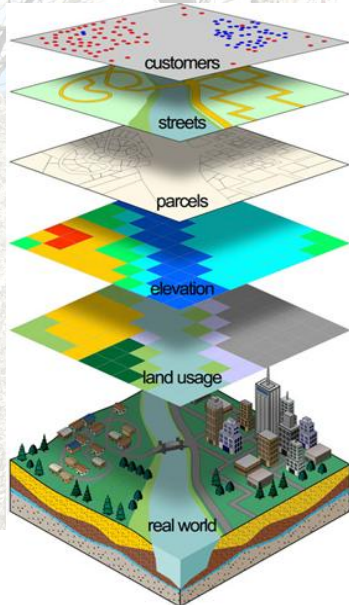
The town needs to undertake plans to incrementally replace the sewer lines and manholes system-wide, beginning with those in the worst condition or in the areas with the most severe problems.

**Strategy WS.G3.P3: Capitalize upon GIS technology to understand our infrastructure**



Geographic Information Systems (GIS) are a technology that allows for the mapping and analysis of Geographic Information. In a GIS, attributes about data can be stored in databases that accompany the spatially mapped feature. This allows GIS to be used as a functional and complete record keeping system for system infrastructure. But

much more than just a computer map or a digital record keeping system, GIS also enables that data to be robustly analyzed by considering its spatial characteristics and other attributes. GIS can



answer questions like “Where are the oldest sections of pipe?”, “What structures are currently located within 50’ of Buckeye Creek?” or “What manholes are located in the TR-280 Sewer Basin?”. It also allows data of various themes to be layered upon each other to make more complicated analysis.

The benefits of GIS are tremendous. It enables easy access to information on the town’s water and sewer assets, that in turn allow us to make better decisions regarding the maintenance and improvement of the system. It enables efficient delivery of utility services by helping the town determine where to focus its efforts.

Beech Mountain originally had a GIS system developed by a consultant engineering firm in 2001, but without a staff member who knew how to operate and update the GIS, and without anyone who was familiar with how to use its data, the system was not kept up to date. In 2011, the Town took a major step towards keeping its system accurate by purchasing a sub-meter Global Positioning System (GPS) to utilize for collecting data.

Going forward, Beech Mountain needs to ensure that it realizes the potential of its GIS. The town needs to ensure that qualified personnel are retained that understand how to use the technology and that can explain it to others. Furthermore, the data in the GIS needs to be better disseminated among various entities who need to know about our utilities systems, such as the staff of various departments and the towns governing decision makers.

**Policy WS.G3.P4: Utilize effective long-term budgeting tools to prepare for the costs of necessary improvements to the utility system**

To undertake the major infrastructure improvements that our system needs will be expensive. The town will need to prepare and stick to multiple year financing tools such as Capital Improvement Plans to accurately forecast and prepare for future expenditures. The cost of improvements that are years ahead should be anticipated now, and money should be set aside incrementally to pay for them. That way the extensive capital costs can be realized, and the town can minimize the necessity to borrow money.

**Discussion and Conclusion**

It will be no small matter to ensure that our water and sewer infrastructure is sufficient for our town’s future, but the undertaking is essential to the success of the town. The town has received an excellent guideline to the improvement of its system in the water and sewer study conducted by Rothrock Engineering. The town should make every effort to follow the recommendations of the study, especially those deemed of critical importance. The work required is extensive, but the first major steps have already been taken.



Beech Mountain Incremental Water and Sewer Capacity-Related CIP FY20 through FY29

Item		FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Totals
<u>Water</u>												
WI 1	Watauga River Intake						\$ 19,104,837					\$ 19,104,837
	Total Water	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 19,104,837	\$ -	\$ -	\$ -	\$ -	\$ 19,104,837
<u>Sewer</u>												
SI 1	Grassy Gap WWTP Replacement						\$ 1,212,840					\$ 1,212,840
	Total Sewer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,212,840	\$ -	\$ -	\$ -	\$ 1,212,840
	<b>Total Water / Sewer Fund Capacity Related Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 19,104,837</b>	<b>\$ 1,212,840</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 20,317,677</b>

Source: Water and Sewer Capital Improvements Plan, July 2019

## Historical Cost Indexes

The table below lists both the RSMMeans® historical cost index based on Jan. 1, 1993 = 100 as well as the computed value of an index based on Jan. 1, 2019 costs. Since the Jan. 1, 2019 figure is estimated, space is left to write in the actual index figures as they become available through the quarterly RSMMeans Construction Cost Indexes.

To compute the actual index based on Jan. 1, 2019 = 100, divide the historical cost index for a particular year by the actual Jan. 1, 2019 construction cost index. Space has been left to advance the index figures as the year progresses.

Year	Historical Cost Index Jan. 1, 1993 = 100		Current Index Based on Jan. 1, 2019 = 100		Year	Historical Cost Index Jan. 1, 1993 = 100		Current Index Based on Jan. 1, 2019 = 100		Year	Historical Cost Index Jan. 1, 1993 = 100		Current Index Based on Jan. 1, 2019 = 100	
	Est.	Actual	Est.	Actual		Actual	Est.	Actual	Actual		Est.	Actual		
Oct 2019*					July 2004	143.7	63.2			July 1986	84.2	37.1		
July 2019*					2003	132.0	58.1			1985	82.6	36.3		
April 2019*					2002	128.7	56.6			1984	82.0	36.1		
Jan 2019*	227.3		100.0	100.0	2001	125.1	55.0			1983	80.2	35.3		
July 2018		222.9	98.1		2000	120.9	53.2			1982	76.1	33.5		
2017		213.6	94.0		1999	117.6	51.7			1981	70.0	30.8		
2016		207.3	91.2		1998	115.1	50.6			1980	62.9	27.7		
2015		206.2	90.7		1997	112.8	49.6			1979	57.8	25.4		
2014		204.9	90.1		1996	110.2	48.5			1978	53.5	23.5		
2013		201.2	88.5		1995	107.6	47.3			1977	49.5	21.8		
2012		194.6	85.6		1994	104.4	45.9			1976	46.9	20.6		
2011		191.2	84.1		1993	101.7	44.7			1975	44.8	19.7		
2010		183.5	80.7		1992	99.4	43.7			1974	41.4	18.2		
2009		180.1	79.2		1991	96.8	42.6			1973	37.7	16.6		
2008		180.4	79.4		1990	94.3	41.5			1972	34.8	15.3		
2007		169.4	74.5		1989	92.1	40.5			1971	32.1	14.1		
2006		162.0	71.3		1988	89.9	39.5			1970	28.7	12.6		
2005		151.6	66.7		1987	87.7	38.6			1969	26.9	11.8		

### Adjustments to Costs

The "Historical Cost Index" can be used to convert national average building costs at a particular time to the approximate building costs for some other time.

#### Example:

Estimate and compare construction costs for different years in the same city.

To estimate the national average construction cost of a building in 1970, knowing that it cost \$900,000 in 2019:

INDEX in 1970 = 28.7

INDEX in 2019 = 227.3

#### Time Adjustment Using the Historical Cost Indexes:

$$\frac{\text{Index for Year A}}{\text{Index for Year B}} \times \text{Cost in Year B} = \text{Cost in Year A}$$

$$\frac{\text{INDEX 1970}}{\text{INDEX 2019}} \times \text{Cost 2019} = \text{Cost 1970}$$

$$\frac{28.7}{227.3} \times \$900,000 = .126 \times \$900,000 = \$113,400$$

The construction cost of the building in 1970 was \$113,400.

**Note:** The city cost indexes for Canada can be used to convert U.S. national averages to local costs in Canadian dollars.

#### Example:

To estimate and compare the cost of a building in Toronto, ON in 2019 with the known cost of \$600,000 (US\$) in New York, NY in 2019:

INDEX Toronto = 110.1

INDEX New York = 132.1

$$\frac{\text{INDEX Toronto}}{\text{INDEX New York}} \times \text{Cost New York} = \text{Cost Toronto}$$

$$\frac{110.1}{132.1} \times \$600,000 = .834 \times \$600,000 = \$500,076$$

The construction cost of the building in Toronto is \$500,076 (CNS\$).

\*Historical Cost Index updates and other resources are provided on the following website:  
<http://info.thegordiangroup.com/RSMMeans.html>





## COUNCIL ACTION ITEM

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**TO:** Town Council  
**FROM:** Preston Yates  
**DATE:** October 1, 2019  
**SUBJECT:** Proposed New Official Zoning Map

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**FOR THE PURPOSE OF:**

To call for a Public Hearing at the next regularly scheduled Council meeting on November 12, 2019 at 4:00pm. This Public Hearing will be held to consider adopting the proposed new Official Zoning Map. No rezonings are proposed and all existing zonings will be maintained.

**ATTACHED FOR YOUR CONSIDERATION:**

Attached is the proposed new Official Zoning Map.

**STAFF RECOMMENDATION:**

Staff recommends Council to set a Public Hearing for the proposed new Official Zoning Map to take public comments.

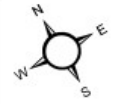
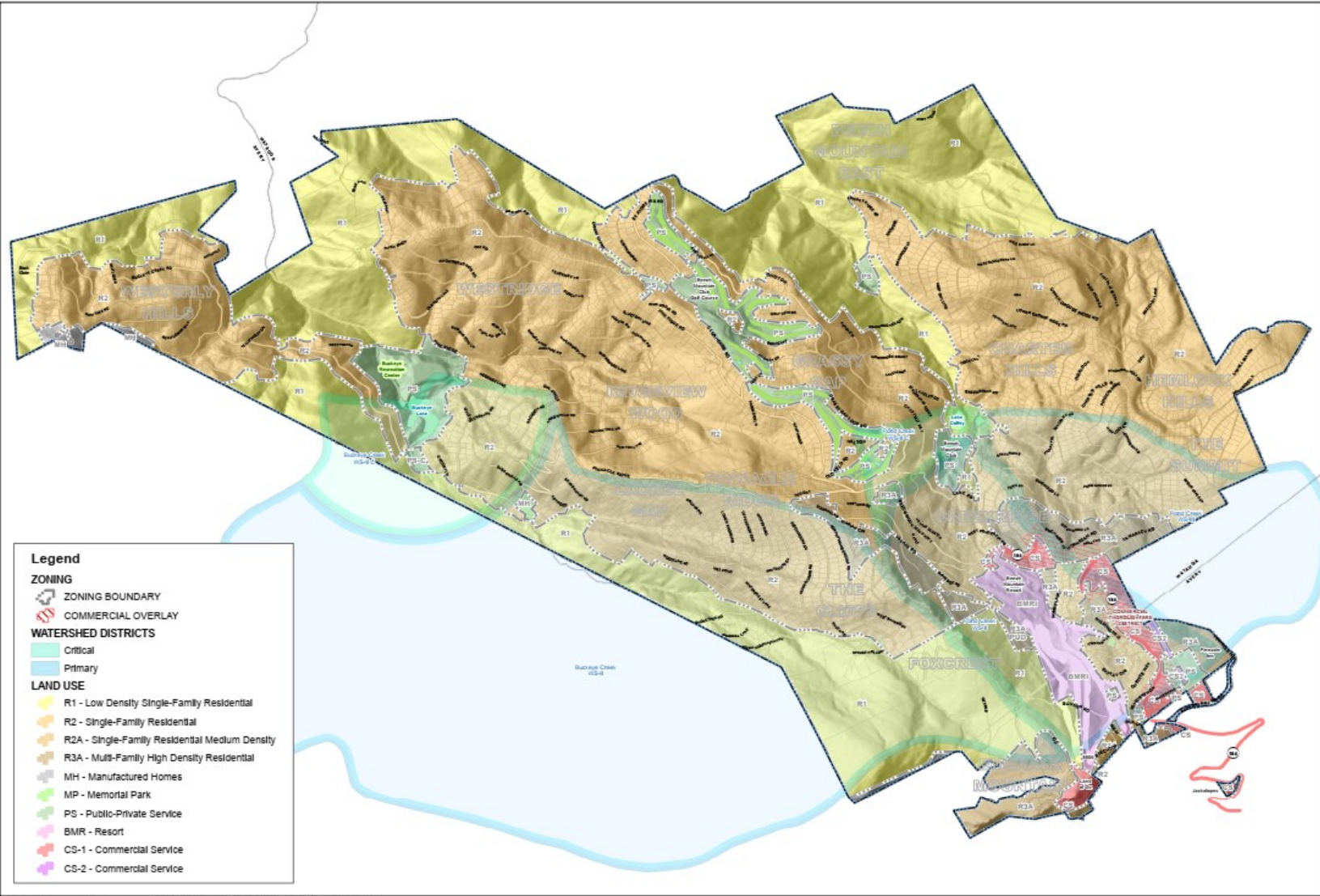
**SIGNATURES:**

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Town Manager

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Town Clerk



0 800 1600  
1 inch = 800 feet

**Legend**

**ZONING**

- ZONING BOUNDARY
- COMMERCIAL OVERLAY

**WATERSHED DISTRICTS**

- Critical
- Primary

**LAND USE**

- R1 - Low Density Single-Family Residential
- R2 - Single-Family Residential
- R2A - Single-Family Residential Medium Density
- R3A - Multi-Family High Density Residential
- MH - Manufactured Homes
- MP - Memorial Park
- PS - Public-Private Service
- BMR - Resort
- CS-1 - Commercial Service
- CS-2 - Commercial Service

**TOWN OF BEECH MOUNTAIN  
ZONING AND LAND USE MAP**  
Source: Beech Mountain GIS

This map was prepared for the Town of Beech Mountain, North Carolina, and is intended for informational purposes only. The Town of Beech Mountain is not responsible for any errors or omissions on this map. The Town of Beech Mountain is not responsible for any damages or liabilities arising from the use of this map. The Town of Beech Mountain is not responsible for any damages or liabilities arising from the use of this map.



Author: [unreadable] Date: 10/20/19 Document: 0000101210190001-Town-Of-Beech-Mountain-GIS-Map-10/20/19



## COUNCIL ACTION ITEM

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**TO:** Mayor & Town Council  
**FROM:** Tim Holloman  
**DATE:** October 1, 2019  
**SUBJECT:** New Public Works Facilities Financing

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**FOR THE PURPOSE OF:**

At the September 10, 2019 regular meeting, Town Council approved the bid for the new Public Works Facilities, Staff seeks review and approval of the financing proposal as presented by BB&T. Three financial institutions were consulted regarding proposals and we received only the attached submitted proposal for the project.

**SIGNATURES:**

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**Town Manager**

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**Town Clerk**



**Branch Banking & Trust Company**

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Governmental Finance  
5130 Parkway Plaza Boulevard  
Charlotte, North Carolina 28217  
Phone (704) 954-1700  
Fax (704) 954-1799

September 26, 2019

Mr. Tim Holloman  
Town of Beech Mountain, NC  
403 Beech Mountain Pkwy  
Beech Mountain, NC 28604

Dear Mr. Holloman:

Branch Banking and Trust Company (“BB&T”) is pleased to offer this proposal for the financing requested by the Town of Beech Mountain, NC (“Borrower”).

**PROJECT:** Public Works Building

**AMOUNT:** \$5,200,000.00

**TERM:** 15 years  
20 years

**INTEREST RATE:** 2.54% (15 year term)  
2.79% (20 year term)

**TAX STATUS:** Tax Exempt-Bank Qualified

**PAYMENTS:** Interest: Annual  
Principal: Annual

**INTEREST RATE CALCULATION:** 30/360

**SECURITY:** First lien security interest on the real property purchased, financed, constructed, or renovated with financing proceeds

**PREPAYMENT TERMS:** Prepayable in whole at any time for the first half of the term with a one percent prepayment penalty. After the first half of the term the transaction will be prepayable in whole at any time without penalty.

**RATE EXPIRATION:** November 29, 2019

**DOCUMENTATION/ LEGAL REVIEW FEE:** \$5,900

**FUNDING:** Proceeds will be deposited into an account held at BB&T at closing pending disbursement for project costs.

**DOCUMENTATION:** BB&T and its counsel shall prepare the deed of trust and all documentation for the Borrower. We shall provide a sample of all required documentation to you and your counsel if BB&T is the successful proposer. BB&T will not require a survey or title insurance. Evidence of LGC approval is required when applicable. At a minimum, BB&T shall require flood insurance, if applicable.

The financing documents shall include provisions that will outline appropriate changes to be implemented in the event that this transaction is determined to be taxable or non-bank qualified in accordance with state statutes or the Internal Revenue Service Code.

**REPORTING**

**REQUIREMENTS:** BB&T will require financial statements to be delivered within 270 days after the conclusion of each fiscal year-end throughout the term of the financing.

Should we become the successful proposer, we have attached the form of a resolution that your governing board can use to award the financing to BB&T. If your board adopts this resolution, then BB&T shall not require any further board action prior to closing the transaction.

BB&T shall have the right to cancel this offer by notifying the Borrower of its election to do so (whether this offer has previously been accepted by the Borrower) if at any time prior to the closing there is a material adverse change in the Borrower's financial condition, if we discover adverse circumstances of which we are currently unaware, if we are unable to agree on acceptable documentation with the Borrower or if there is a change in law (or proposed change in law) that changes the economic effect of this financing to BB&T.

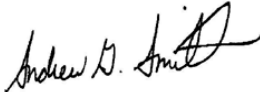
Costs of counsel for the Borrower and any other costs will be the responsibility of the Borrower.

The stated interest rate assumes that the Borrower expects to borrow no more than \$10,000,000 in the current calendar year and that the financing will qualify as qualified tax-exempt financing under the Internal Revenue Code. BB&T reserves the right to terminate this bid or to negotiate a mutually acceptable interest rate if the financing is not qualified tax-exempt financing.

BB&T appreciates the opportunity to offer this financing proposal. Please call me at (803) 251-1328 with your questions and comments. We look forward to hearing from you.

Sincerely,

*Branch Banking & Trust Company*



Andrew G. Smith  
Senior Vice President

**Resolution Approving Financing Terms**

**WHEREAS**, the Town of Beech Mountain, NC (“Borrower”) has previously determined to finance the construction of a Public Works building (the “Project”), and the Finance Director has now presented a proposal for the financing of such Project.

**BE IT THEREFORE RESOLVED, as follows:**

1. The Borrower hereby determines to finance the Project through Branch Banking and Trust Company (“BB&T”) in accordance with the proposal dated September 26, 2019, or as such proposal may be supplemented or amended by BB&T and the Borrower verbally or in writing. The amount financed shall not exceed \$5,200,000.00, the annual interest rate (in the absence of default or change in tax status) shall not exceed \_\_\_\_\_%, and the financing term shall not exceed \_\_\_\_\_ years from the date of closing.

2. All financing contracts and all related documents for the closing of the financing (the “Financing Documents”) shall be consistent with the foregoing terms. All officers and employees of the Borrower are hereby authorized and directed to execute and deliver any Financing Documents, and to take all such further action as they may consider necessary or desirable, to carry out the financing of the Project as contemplated by the proposal and this resolution. The Financing Documents shall include a Financing Agreement and Deed of Trust and such other documents as BB&T may request. Pursuant to the Financing Agreement and Deed of Trust, (a) BB&T will advance moneys to the Borrower to pay the costs of the Project and the financing costs related thereto, and the Borrower will repay such advance in installments, and (b) the Borrower will grant a lien on the site of the Project, or portions thereof, together with all fixtures and improvements located thereon, to BB&T as security for such advance.

3. The Finance Director is hereby authorized and directed to hold executed copies of the Financing Documents until the conditions for the delivery of the Financing Documents have been completed to the Finance Director’s satisfaction. The Finance Director is authorized to approve changes to any Financing Documents previously signed by Borrower officers or employees, provided that such changes shall not substantially alter the intent of such documents or certificates from the intent expressed in the forms executed by such officers. The Financing Documents shall be in such final forms as the Finance Director shall approve, with the Finance Director’s release of any Financing Document for delivery constituting conclusive evidence of such officer’s final approval of the Document’s final form.

4. The Borrower shall not take or omit to take any action the taking or omission of which shall cause its interest payments on this financing to be includable in the gross income for federal income tax purposes of the registered owners of the interest payment obligations. The Borrower hereby designates its obligations to make principal and interest payments under the Financing Documents as “qualified tax-exempt obligations” for the purpose of Internal Revenue Code Section 265(b)(3).

5. The Borrower intends that the adoption of this resolution will be a declaration of the Borrower’s official intent to reimburse expenditures for the Project that are to be financed from the proceeds of the BB&T financing described above. The Borrower intends that funds that have been advanced, or that may be advanced, from the Borrower’s general fund or any other Borrower fund related to the Project, for costs of the Project may be reimbursed from the financing proceeds.

6. All prior actions of Borrower officers in furtherance of the purposes of this resolution are hereby ratified, approved and confirmed. All other resolutions (or parts thereof) in conflict with this resolution are hereby repealed, to the extent of the conflict. This resolution shall take effect immediately.

Approved this \_\_\_ day of \_\_\_\_\_, 2019

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

SEAL

Beech Mountain, NC Estimated Payment Schedule

Nominal Annual Rate: 2.540%

Event	Date	Amount	Number	Period	End Date
1 Loan	9/26/2019	5,200,000.00	1		
2 Payment Fixed Principal (+Int.)	9/26/2020	346,666.67	15	<b>Annual</b>	9/26/2034

AMORTIZATION SCHEDULE - Normal Amortization, 360 Day Year

	Date	Payment	Interest	Principal	Balance
Loan	9/26/2019				5,200,000.00
2020 Totals		0.00	0.00	0.00	
1	9/26/2020	478,746.67	132,080.00	346,666.67	4,853,333.33
2021 Totals		478,746.67	132,080.00	346,666.67	
2	9/26/2021	469,941.34	123,274.67	346,666.67	4,506,666.66
2022 Totals		469,941.34	123,274.67	346,666.67	
3	9/26/2022	461,136.00	114,469.33	346,666.67	4,159,999.99
2023 Totals		461,136.00	114,469.33	346,666.67	
4	9/26/2023	452,330.67	105,664.00	346,666.67	3,813,333.32
2024 Totals		452,330.67	105,664.00	346,666.67	
5	9/26/2024	443,525.34	96,858.67	346,666.67	3,466,666.65
2025 Totals		443,525.34	96,858.67	346,666.67	
6	9/26/2025	434,720.00	88,053.33	346,666.67	3,119,999.98
2026 Totals		434,720.00	88,053.33	346,666.67	
7	9/26/2026	425,914.67	79,248.00	346,666.67	2,773,333.31
2027 Totals		425,914.67	79,248.00	346,666.67	
8	9/26/2027	417,109.34	70,442.67	346,666.67	2,426,666.64
2028 Totals		417,109.34	70,442.67	346,666.67	
9	9/26/2028	408,304.00	61,637.33	346,666.67	2,079,999.97
2029 Totals		408,304.00	61,637.33	346,666.67	
10	9/26/2029	399,498.67	52,832.00	346,666.67	1,733,333.30
2030 Totals		399,498.67	52,832.00	346,666.67	
11	9/26/2030	390,693.34	44,026.67	346,666.67	1,386,666.63

2031 Totals		390,693.34	44,026.67	346,666.67	
12	9/26/2031	381,888.00	35,221.33	346,666.67	1,039,999.96
2032 Totals		381,888.00	35,221.33	346,666.67	
13	9/26/2032	373,082.67	26,416.00	346,666.67	693,333.29
2033 Totals		373,082.67	26,416.00	346,666.67	
14	9/26/2033	364,277.34	17,610.67	346,666.67	346,666.62
2034 Totals		364,277.34	17,610.67	346,666.67	
15	9/26/2034	355,472.00	8,805.38	346,666.62	0.00
2035 Totals		355,472.00	8,805.38	346,666.62	
Grand Totals		6,256,640.05	1,056,640.05	5,200,000.00	

Beech Mountain, NC Estimated Payment Schedule

Nominal Annual Rate: 2.790%

	Event	Date	Amount	Number	Period	End Date
1	Loan	9/26/2019	5,200,000.00	1		
2	Payment	9/26/2020	260,000.00	20	<b>Annual</b>	9/26/2039
	Fixed Principal (+Int.)					

AMORTIZATION SCHEDULE - Normal Amortization, 360 Day Year

	Date	Payment	Interest	Principal	Balance
Loan	9/26/2019				5,200,000.00
2020 Totals		0.00	0.00	0.00	
1	9/26/2020	405,080.00	145,080.00	260,000.00	4,940,000.00
2021 Totals		405,080.00	145,080.00	260,000.00	
2	9/26/2021	397,826.00	137,826.00	260,000.00	4,680,000.00
2022 Totals		397,826.00	137,826.00	260,000.00	
3	9/26/2022	390,572.00	130,572.00	260,000.00	4,420,000.00
2023 Totals		390,572.00	130,572.00	260,000.00	
4	9/26/2023	383,318.00	123,318.00	260,000.00	4,160,000.00
2024 Totals		383,318.00	123,318.00	260,000.00	
5	9/26/2024	376,064.00	116,064.00	260,000.00	3,900,000.00
2025 Totals		376,064.00	116,064.00	260,000.00	
6	9/26/2025	368,810.00	108,810.00	260,000.00	3,640,000.00
2026 Totals		368,810.00	108,810.00	260,000.00	
7	9/26/2026	361,556.00	101,556.00	260,000.00	3,380,000.00
2027 Totals		361,556.00	101,556.00	260,000.00	
8	9/26/2027	354,302.00	94,302.00	260,000.00	3,120,000.00
2028 Totals		354,302.00	94,302.00	260,000.00	
9	9/26/2028	347,048.00	87,048.00	260,000.00	2,860,000.00
2029 Totals		347,048.00	87,048.00	260,000.00	
10	9/26/2029	339,794.00	79,794.00	260,000.00	2,600,000.00
2030 Totals		339,794.00	79,794.00	260,000.00	
11	9/26/2030	332,540.00	72,540.00	260,000.00	2,340,000.00

2031 Totals		332,540.00	72,540.00	260,000.00	
12	9/26/2031	325,286.00	65,286.00	260,000.00	2,080,000.00
2032 Totals		325,286.00	65,286.00	260,000.00	
13	9/26/2032	318,032.00	58,032.00	260,000.00	1,820,000.00
2033 Totals		318,032.00	58,032.00	260,000.00	
14	9/26/2033	310,778.00	50,778.00	260,000.00	1,560,000.00
2034 Totals		310,778.00	50,778.00	260,000.00	
15	9/26/2034	303,524.00	43,524.00	260,000.00	1,300,000.00
2035 Totals		303,524.00	43,524.00	260,000.00	
16	9/26/2035	296,270.00	36,270.00	260,000.00	1,040,000.00
2036 Totals		296,270.00	36,270.00	260,000.00	
17	9/26/2036	289,016.00	29,016.00	260,000.00	780,000.00
2037 Totals		289,016.00	29,016.00	260,000.00	
18	9/26/2037	281,762.00	21,762.00	260,000.00	520,000.00
2038 Totals		281,762.00	21,762.00	260,000.00	
19	9/26/2038	274,508.00	14,508.00	260,000.00	260,000.00
2039 Totals		274,508.00	14,508.00	260,000.00	
20	9/26/2039	267,254.00	7,254.00	260,000.00	0.00
2040 Totals		267,254.00	7,254.00	260,000.00	
Grand Totals		6,723,340.00	1,523,340.00	5,200,000.00	



## ORDINANCE

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**TO:** Mayor & Town Council  
**FROM:** Tim Holloman  
**DATE:** October 1, 2019  
**SUBJECT:** Ordinance to amend Chapter 73- reduce speed limits on gravel roads

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**FOR THE PURPOSE OF:**

Ordinance to amend Chapter 73- reduce speed limits on gravel roads:

**ATTACHED FOR YOUR CONSIDERATION:**

1. Beech Mountain Parkway starting at State Road 1402 to terminus (Council approved 9/10/2019)
2. Hawthorne Road (Council approved 9/10/2019)
3. Lower Snowbird Trail (Council approved 9/10/2019)
4. Upper Snowbird Trail (Council approved 9/10/2019)
5. Black Birch Lane
6. Buckeye Creek Road
7. Lakeledge Road- gravel portion
8. Rhododendron Road
9. Greenbriar Road
10. Hornbeam Road
11. Wintergreen Way

**SIGNATURES:**

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Town Manager

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Town Clerk



Ordinance

Town of Beech Mountain  
North Carolina

Date: 9/10/2019

**Ordinance No. 2019-07**

**TOWN OF BEECH MOUNTAIN**

**AN ORDINANCE TO AMEND CHAPTER 73 – SPEED LIMITS**

**WHEREAS**, the Town of Beech Mountain is a municipal corporation of the State of North Carolina authorized by statute to provide for the health, safety, and general welfare of its citizens; and

**WHEREAS**, N.C. Gen. Stat. §160A-296(a) provides “A city shall have general authority and control over all public streets, sidewalks, alleys, bridges, and other ways of public passage within its corporate limits except to the extent that authority and control over certain streets and bridges is vested in the Board of Transportation,” and

**WHEREAS**, the Town of Beech Mountain has a number of gravel roads, and a decrease in the speed limit for these roads will enhance pedestrian safety, reduce slinging of gravel, and decrease dust resulting from vehicular traffic; and

**WHEREAS**, the Town Council finds that a reduction in the speed limit for these roads will promote the safety and welfare of those using these roads;

**NOW THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF BEECH MOUNTAIN, NORTH CAROLINA, THAT:**

SECTION I. CHAPTER 73, Schedule IV of the Town of Beech Mountain Code of Ordinances is hereby amended to include the additional following streets on the schedule of Speed Limits as having a Maximum Speed Limit of 15 mph:

1. Beech Mountain Parkway starting at State Road 1402 to terminus (Council approved 9/10/2019)
2. Hawthorne Road (Council approved 9/10/2019)
3. Lower Snowbird Trail (Council approved 9/10/2019)
4. Upper Snowbird Trail (Council approved 9/10/2019)
5. Black Birch Lane
6. Buckeye Creek Road

7. Lakeledge Road starting at 108 to 305 terminus
8. Rhododendron Road
9. Greenbriar Road
10. Hornbeam Road
11. Wintergreen Way

SECTION II. All other speed limits and restrictions set forth in Schedule IV of Chapter 73 are reaffirmed and not otherwise disturbed or altered by the passage of this Ordinance.

SECTION III. CODIFICATION. The provisions of Sections I of this Ordinance shall be published as appropriate in the Town of Beech Mountain Code of Ordinances as soon as practicable, and shall be included as part of the Table of Speed Limit Restrictions.

SECTION IV. SEVERABILITY CLAUSE. If any section, part or provision of this Ordinance is declared unconstitutional or invalid by a court of competent jurisdiction, then it is expressly provided and it is the intention of the Town Council in passing this Ordinance that its parts shall be severable and all other parts of the Ordinance shall not be affected thereby and they shall remain in full force and effect.

SECTION V. PUBLICATION AND EFFECTIVE DATE. This Ordinance shall take effect upon its ratification by the Town Council.

READ, CONSIDERED, PASSED AND APPROVED at a regular meeting of the Town Council of Beech Mountain, North Carolina, at which a quorum was present and which was held on the 1st day of October, 2019.

This Ordinance adopted the 1st day of October, 2019.

\_\_\_\_\_  
Renee D. Castiglione, Mayor

Attest:

\_\_\_\_\_  
Tamara Mercer  
Town Clerk





# REPORT

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**TO:** Mayor & Town Council  
**FROM:** Sean Royall  
**DATE:** October 1, 2019  
**SUBJECT:** 2019 September Recreation Report

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**FOR THE PURPOSE OF:**  
Parks and Recreation facilities and program report

**SIGNATURES:**

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Town Manager

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Town Clerk



## September 2019 Recreation Report

### Facility Report

Finance Report

Total Monthly Revenue	\$9,434.78
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### Check-In Report

Member Visits	443
Non-Member Visits	72

### Membership Report

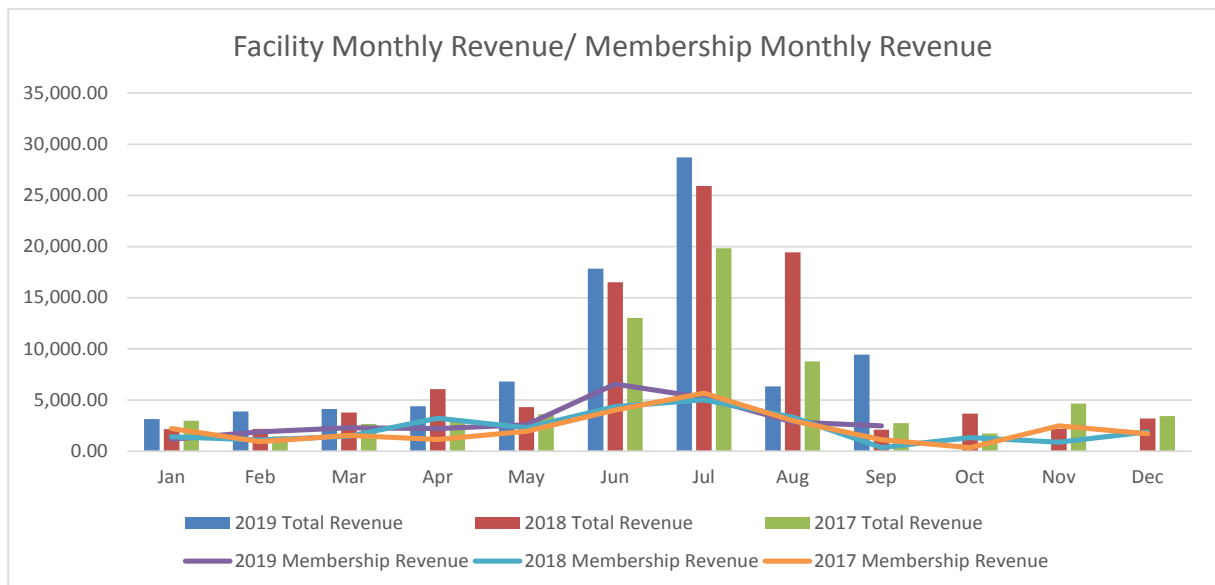
Total Memberships - \$2,475.00 (Details attached)

<b>Family Annual \$1,225.00</b>		
Active	Passes Expired (not renewed)	Passes sold
132	2	7

<b>Individual Annual \$400.00</b>		
Active	Passes Expired (not renewed)	Passes sold
106	0	4

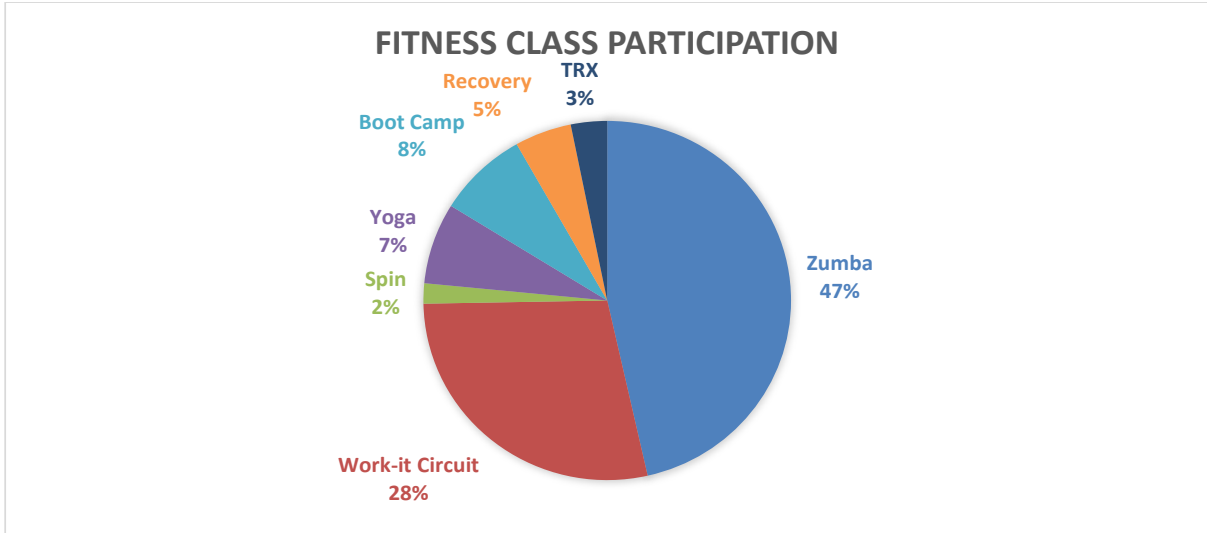
<b>Week Passes - \$150.00</b>	
Family	Individual
5	0

Renewal Emails and Letters sent: 14 family, 16 individual past due



## Fitness Report

Participants:



Class/Number of classes offered in the month/ Number of participants

Zumba	204
Work-it Circuit	124
Spin	8
Yoga	32
Boot Camp	35
Recovery	22
TRX	14

## Outdoor Report

Participants:

Emerald Outback Trail (as read from trail counter)	961
Guided Hikes (2 hike offered)	5

## Director's Notes:

1. Composite Benches and tables arrived and installed at parks and Recreation center
2. Bear Proof cans arrived and will be installed in next few days/week
3. Flashing on gym/tennis court fans has been installed to prevent leaking in courts
4. Recreation report was ran on 23<sup>rd</sup> of the month

Respectfully Submitted,

Sean Royall  
 Parks and Recreation Director  
 Town of Beech Mountain  
 September 23, 2019

### **Detailed Revenue Totals**

**PROGRAM REGISTRATIONS  
\$6,444.28**

**MEMBERSHIPS \$2,475.00**

**Facility Reservation \$20.00**

**POS \$495.50**

**Total Online Sales \$40.00**

**TOTAL MONTHLY REVENUE  
\$9,434.78**

### **Programs**

**Enduro \$5,662.28**

**Holiday Market \$200.00**

**Summer Camp \$578.00**

### **Memberships**

**Family Annual Pass \$1,225.00**

**Individual Annual Pass \$400.00**

**Condo Membership \$700.00**

**Individual Week Pass \$0**

**Family Week Pass \$150.00**

### **POS**

**Binoculars \$ (Not recorded)**

**Coke Machine \$21.00**

**Daily Use (Non Member Check-in)  
\$216.00**

**Fitness Class \$45.00**

**Personal Training \$180.00**

**Trail Map Wholesale \$25.00**

**Trail Map \$8.00**



# REPORT

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**TO:** Town Council  
**FROM:** Robert Pudney  
**DATE:** October 1, 2019  
**SUBJECT:** Fire Department Monthly Report

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**SIGNATURES:**

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**Town Manager**

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**Town Clerk**

**BEECH MOUNTAIN FIRE DEPARTMENT  
Monthly Report  
September 23, 2019**

EVENT	THIS PERIOD	SAME PERIOD LAST YEAR	FISCAL YTD
FIRE CALLS	7	7	17
MEDICAL CALLS	12	12	41
FIRE SAFETY INSPECTIONS	6	4	11
PUBLIC EDUCATION	0	0	3
FIRE HYDRANT INSPECTIONS	0	0	2
TRAINING HOURS	228	142.5	671
MEETINGS	6	6	24

**COMMENTS:**

Membership Recruitment Program.

Addressing Project Underway

NC Grant Implementation

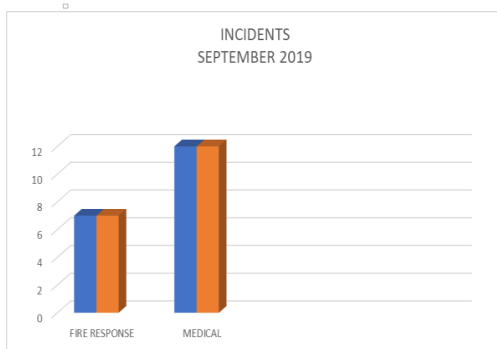
Annual Hose Testing

Pump Servicing

**Goals Next Period:**

EMT Class

Federal Grant





# REPORT

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**TO:** Mayor and Town Council  
**FROM:** Tim Barnett  
**DATE:** October 1, 2019  
**SUBJECT:** Police Department Monthly Report

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**SIGNATURES:**

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**Town Manager**

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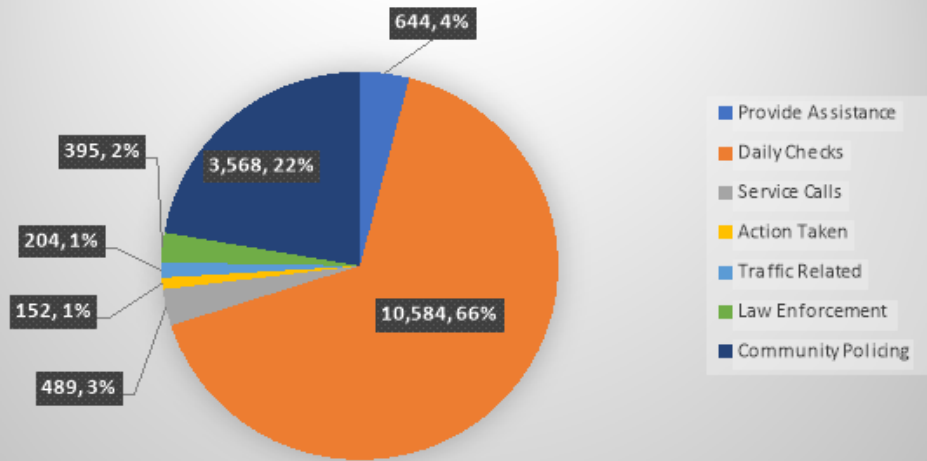
**Town Clerk**



Activity Log Yearly Summary Totals  
 Beech Mountain Police Department  
 January 1, 2019 through September 23, 2019

<i>Call Type</i>	<i>2018</i>	<i>2019</i>	<i>Call Type</i>	<i>2018</i>	<i>2019</i>
<b>Provide Assistance</b>			<b>Traffic Related</b>		
Assist Fire Department	30	23	Driving While Impaired	4	3
Assist Investigation	0	0	Improper Parking	26	52
Assist Other Agency	48	57	Stationary/Directed Patrol	48	46
Assist Town Dept/Business	39	5	Traffic Control	5	7
Assist Home Owner	35	41	Vehicle Accidents	35	21
Assist Motorist	204	120	Vehicle Stops	64	75
Assist Other Officer	60	121			
Escort	362	224	<b>Law Enforcement Calls</b>		
Medical Calls	38	53	911 Hang Ups	19	25
			Alarms	77	69
<b>Daily Checks</b>			Breaking & Entering	7	11
Business Checks	8,356	8,464	Domestic Complaints	18	15
Care Track Test	46	33	Fight	3	1
Security Checks	705	1,221	Fire Works Violations	2	15
Residence Checks	605	825	Fraud	1	2
Welfare Check	36	41	Hit & Run	1	3
			Intoxicated/Drunk & Disruptive	3	6
<b>Service Calls</b>			Investigation	20	15
Animal Control Domestic/Wildlife	52	41	Larceny	16	8
Calls For Service	205	266	Mental Subject	5	6
Deliver Letter/Message	28	59	Missing Person	5	5
Found Property	2	2	Noise Disturbance/Loud Music	26	22
Golf Cart / UTV Inspections	0	43	Open Door/Open Window	14	46
Recreation/Town Deposit	72	78	Prowler	6	0
			Shots Fired/Sound of Shots Fired	3	8
<b>Action Taken</b>			Ski Pass Violation	0	0
Court	18	23	Suspicious Vehicle	48	66
Felony Arrest	1	0	Trespassing	43	30
Misdemeanor Arrest	4	11	Vandalism	7	12
State Citations	46	23			
Town Ordinance Violations	5	5	<b>Community Policing</b>		
Verbal Warning	44	44	Community Policing Contacts	2,889	3,540
Warning Citations	10	30	Community Events	19	28
Warrant Service	6	16			
<b>2018 Event Totals:</b>	14,511		<b>2019 Event Totals:</b>	16,200	

### 2019 Monthly Condensed Calls







# REPORT

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**TO:** Mayor and Town Council  
**FROM:** Kate Gavenus  
**DATE:** October 1, 2019  
**SUBJECT:** TDA Report

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**FOR THE PURPOSE OF:**

This report gives information about media visits to the mountain, numbers of visitors, and tourism economics for NC.

**SIGNATURES:**

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Town Manager

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Town Clerk

**Beech Mountain TDA Report  
To Town Council  
October 2019**

**Marketing/Media:**

From Caroline Eubanks, hosted last month:

<https://www.thisismysouth.com/summer-in-beech-mountain/>

From Melanie Coblentz, hosted this month:

<https://kiddingaroundgreenville.com/land-of-oz>

A good travel piece about the Land of Oz:

<https://roadtrippers.com/magazine/autumn-at-land-of-oz/>

**Media guests September 1-22, 2019:**

**Vanessa Orr** (editor and travel columnist, North Hills Monthly, Pittsburgh, PA) visited the mountain on September 7<sup>th</sup>, and was hosted by the Land of Oz staff at the Autumn at Oz event, and the Beech Mountain Chamber of Commerce at the 4<sup>th</sup> Annual Oz Ball. Sean Barrett, Bernie Kneпка and Mandy Taylor assisted with the arrangements.

**Melanie Coblentz and Kelly Duffy** (Kidding Around Media, Kidding Around Spartanburg and Kidding Around Greenville) visited the mountain September 6<sup>th</sup>-8<sup>th</sup>. They were hosted by Beech Mountain Realty and Rentals, the Brick Oven Pizzeria, Fred's General Mercantile, Mi Jalisco, the Beech Mountain Chamber of Commerce at the 4<sup>th</sup> Annual Oz Ball and the Land of Oz staff at the Autumn at Oz event. Sean Barrett, Bernie Kneпка and Mandy Taylor assisted with the arrangements.

**Karen Warren**, (Thisgirltravels.com, USA Today, Rootsrated) **Renee Gannon**, (Carolina Country), **Annita Thomas**, (Travel Bags with Annita, Oprah Magazine) **Jan Schroder**, (Girl on the Go and The Travel 100) and Allison Seng and Brianna Reid with Pineapple PR visited the mountain September 12-15<sup>th</sup>. They were hosted by VCI Rentals and 4 Seasons at Beech, the Brick Oven Pizzeria, Fred's General Mercantile, the Land of Oz staff at the Autumn at Oz event, the Beech Mountain Resort, Buckeye Recreation Center, Frazier's, Mi Jalisco, White Wolf Lodge and Holy Smokes BBQ, and the Beech Mountain Chamber of Commerce at the 4<sup>th</sup> Annual Oz Ball.

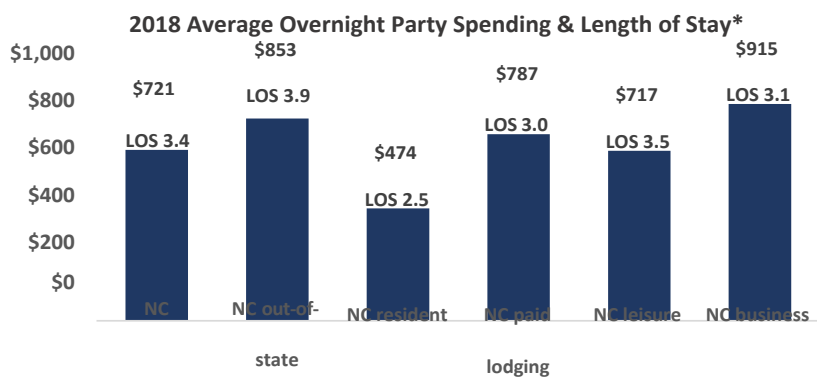
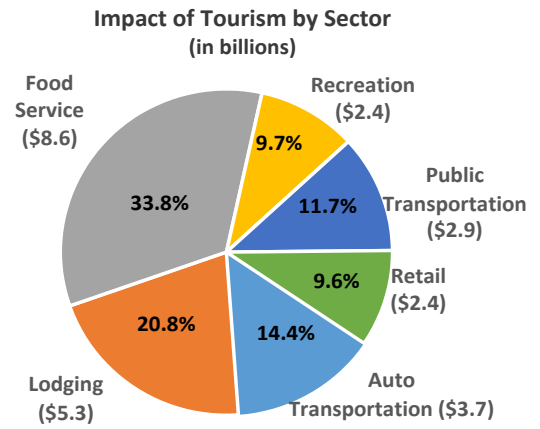
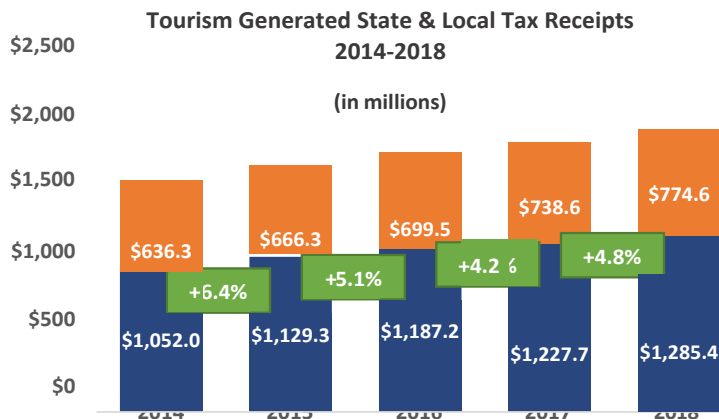
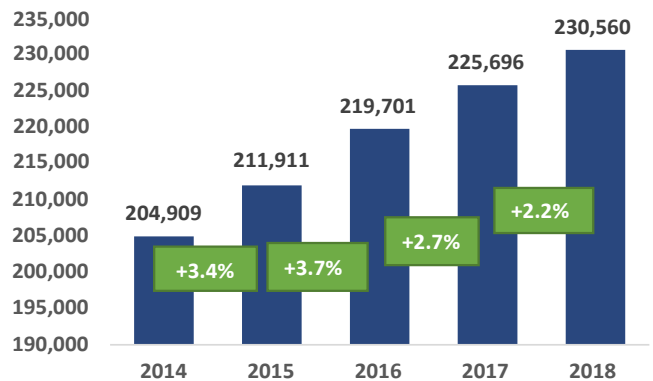
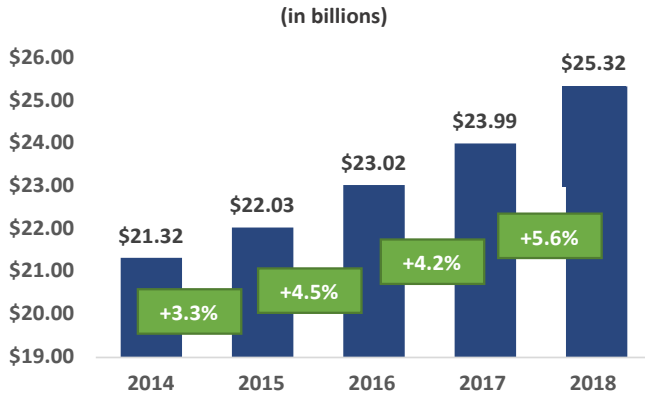
**Results:**

For the month of **September (through the 22<sup>nd</sup>)**, there have already been **629 visitors in the Visitor Center**, which exceeds the 550 visitors for the entire month in 2018. Excluding the visitors during the Autumn at Oz events, about 85% of the visitors came in to get information regarding hiking on the mountain and in the region.

# TOURISM ECONOMIC FAST FACTS - 2018

Direct Visitor Spending 2014-2018

Direct Tourism Employment 2014-2018



**\$69 million**  
Visitor spending per day

**\$5.6 million**  
Visitor related taxes generated per day

**\$532**  
Annual household tax savings

**1/45**  
NC residents directly employed by tourism

\*LOS – length of stay

Sources: TravelTrakAmerica, 2019

U.S. Travel Association, 2019







# REPORT

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**TO:** Town Council  
**FROM:** Preston Yates  
**DATE:** October 1, 2019  
**SUBJECT:** Planning and Inspections Report 2019-09

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**FOR THE PURPOSE OF:**

Planning and Inspections monthly report for September 2019 for review and consideration by Town Council.

**SIGNATURES:**

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Town Manager

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Town Clerk

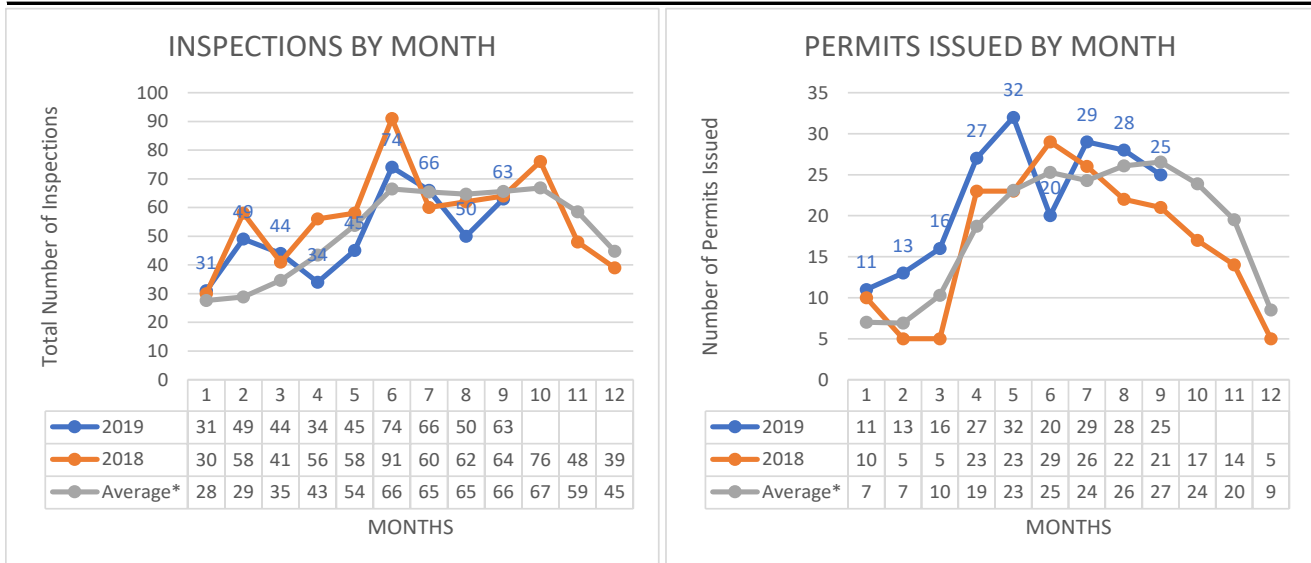
**TOWN OF BEECH MOUNTAIN**  
**Monthly Report**  
**Department of Building Inspections**  
**September-2019**

**1. Number of Inspections**

	This Month	Last Month	Same Month Last Year	This Fiscal Year to Date	Last Fiscal Year to Date	Calendar Year to Date
Building	33	28	31	92	70	218
Electrical	12	8	14	32	19	81
Plumbing	8	4	9	14	10	51
Htg/Air & Misc.	10	10	8	41	23	106

**2. Permits Issued**

No. Issued	27	28	22	82	48	201
Value	\$ 437,890	\$ 710,424	\$ 186,454	\$ 1,868,114	\$ 624,877	\$ 3,396,238
Permit Fees	\$ 9,010.80	\$ 3,965.10	\$ 3,971.44	\$ 20,357.77	\$ 6,868.84	\$ 67,580.39



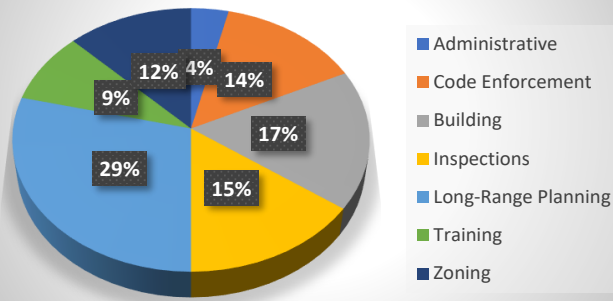
\*NOTE: Average Inspections and Permits are calculated based on a running average since April 2009

**3. Nature of Building Permits**

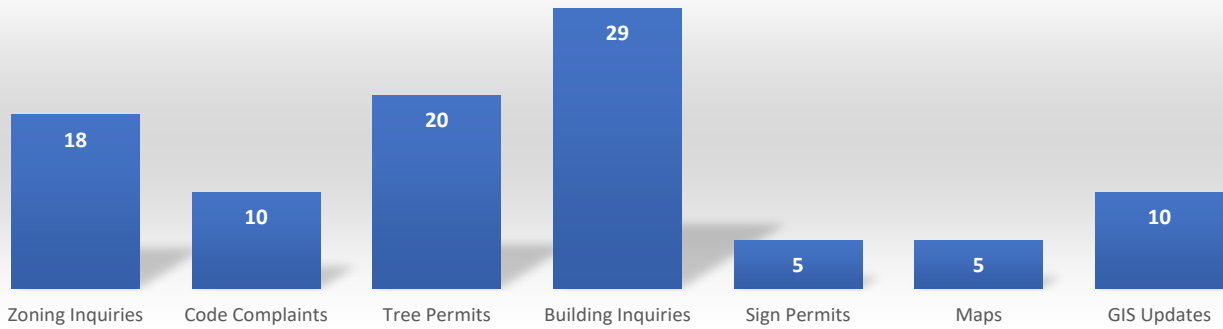
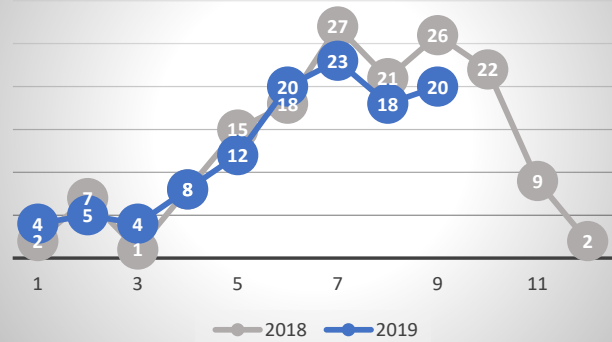
# of Permits	Type	Address	Total Fees	Valuation	New Bldgs FY to Date	New Bldgs Last FY
1	New Single Family		\$ 5,380.00	\$ 70,000.00	1	0
	New Multi-Family				0	0
	New Commercial				0	0
26	Other	Various	\$ 3,630.80	\$ 367,890		
27			\$ 9,010.80	\$ 437,890		

**TOWN OF BEECH MOUNTAIN**  
**PLANNING AND ZONING MONTHLY REPORT**  
 September-2019

**Time Allocation**



**Tree Permits**



**Summary and Highlights**

**Long Range Planning:**

Finalized Comprehensive Plan for public review

**Zoning:**

Prepared Official Zoning Map for adoption by Council

**GIS:**

Updated Zoning layer for development of official zoning map

**Building**

Building Permits continue at or above 10-year averages

**Code Enforcement:**

Developed plan for active code enforcement of address posting





# REPORT

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**TO:** Town Council  
**FROM:** Daniel Davis  
**DATE:** October 1, 2019  
**SUBJECT:** Department of Infrastructure Reports

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**FOR THE PURPOSE OF:**  
September report for Department of Infrastructure

**SIGNATURES:**

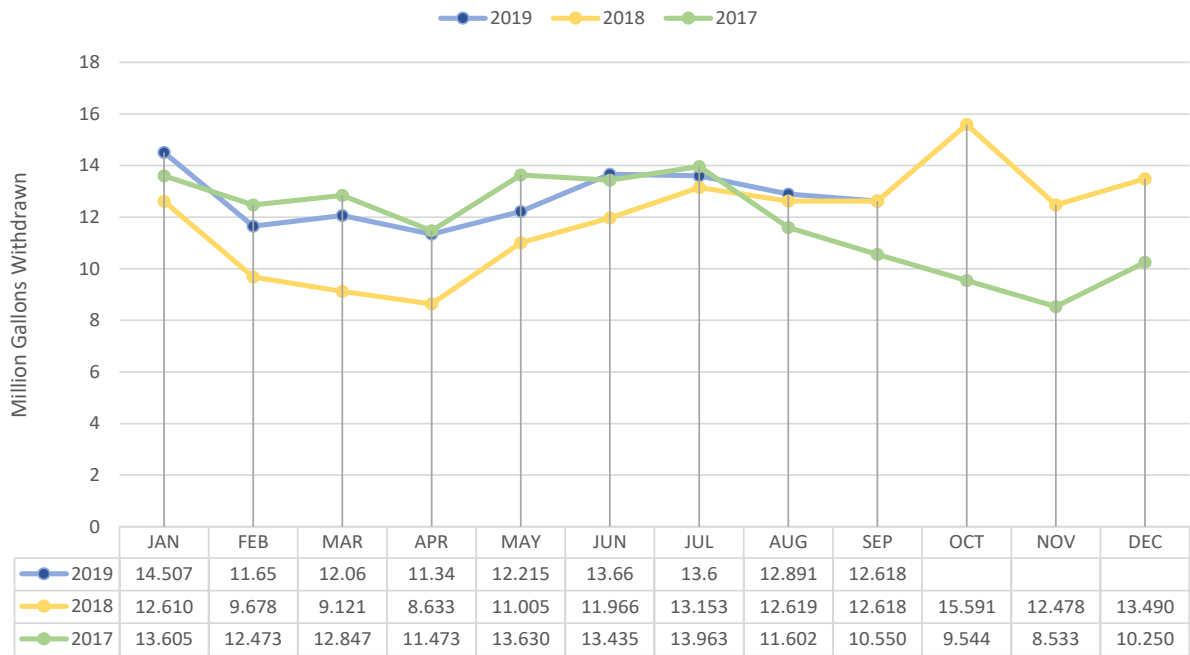
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Town Manager

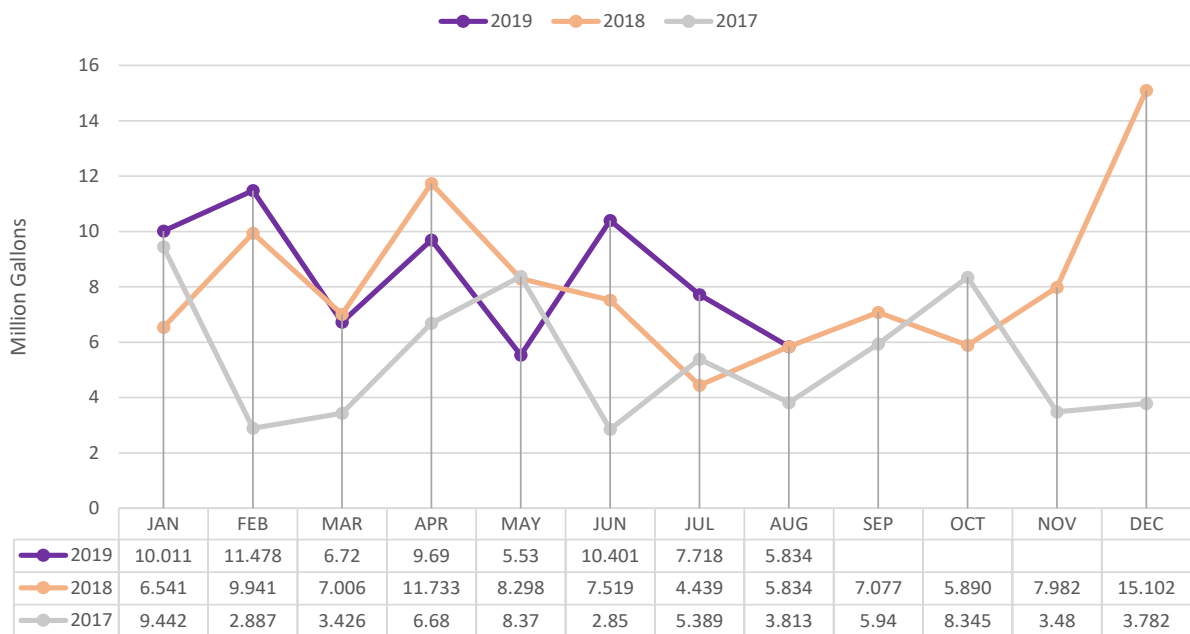
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Town Clerk

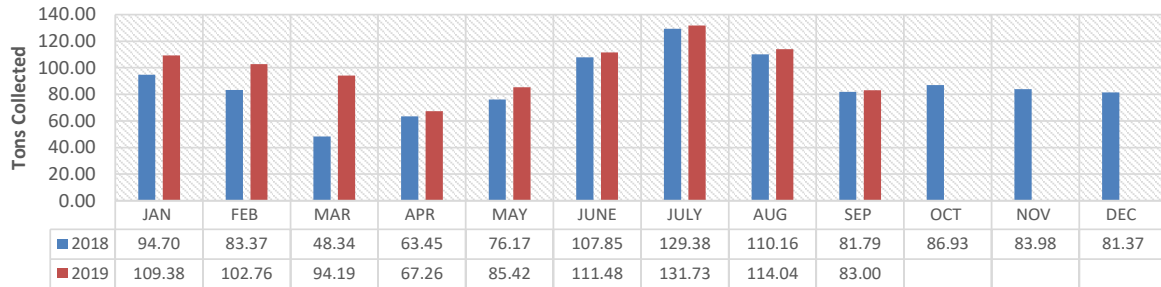
### Raw Water Withdrawl from Buckeye Lake 3 Year Period



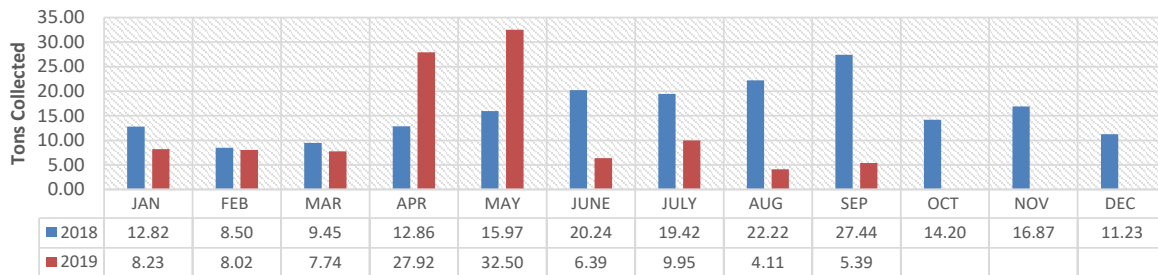
### Total Wastewater Flows 3 Year Period



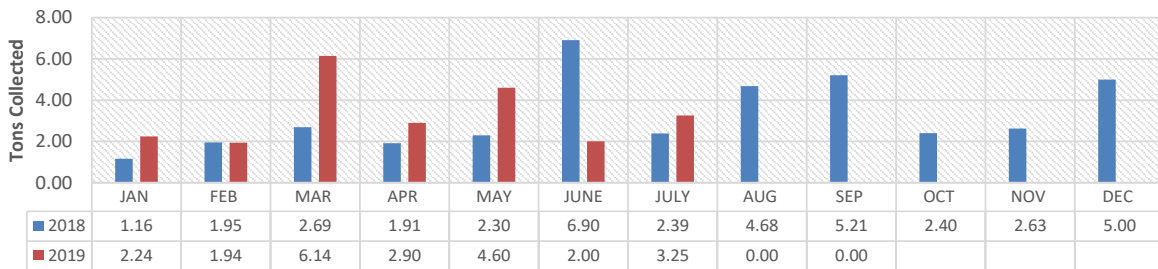
### Solid Waste



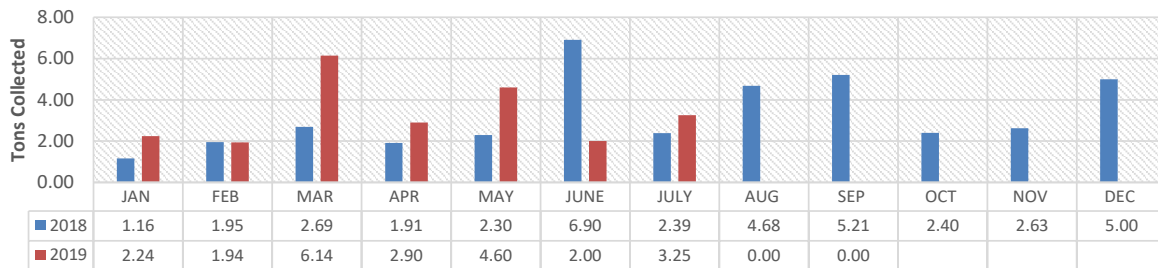
### Construction Material



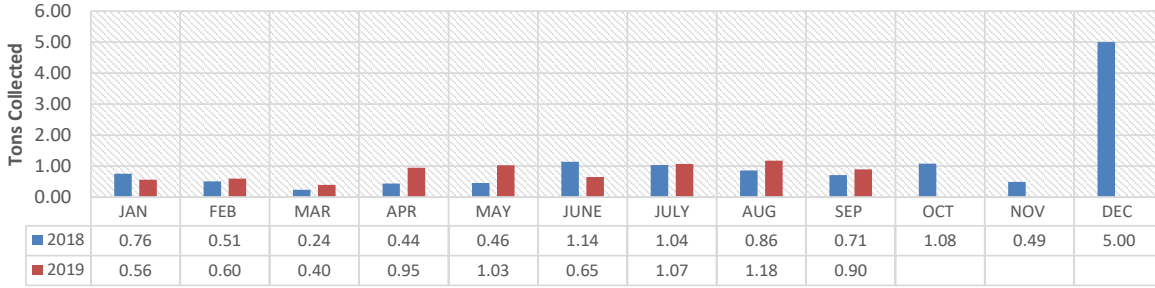
### Recycled Metal



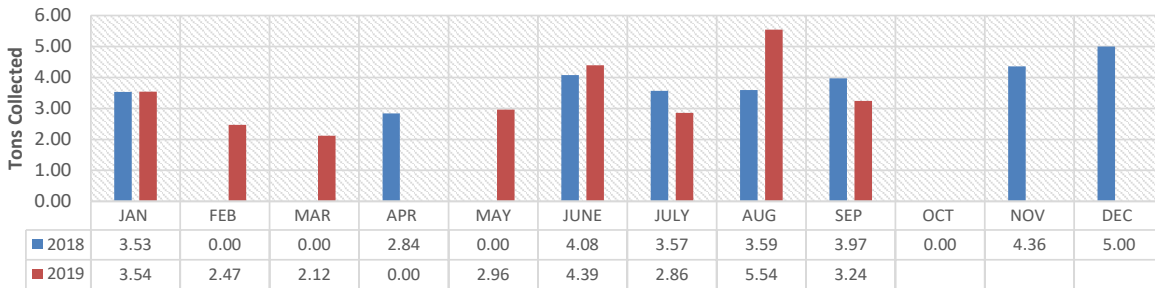
### Recycled Paper



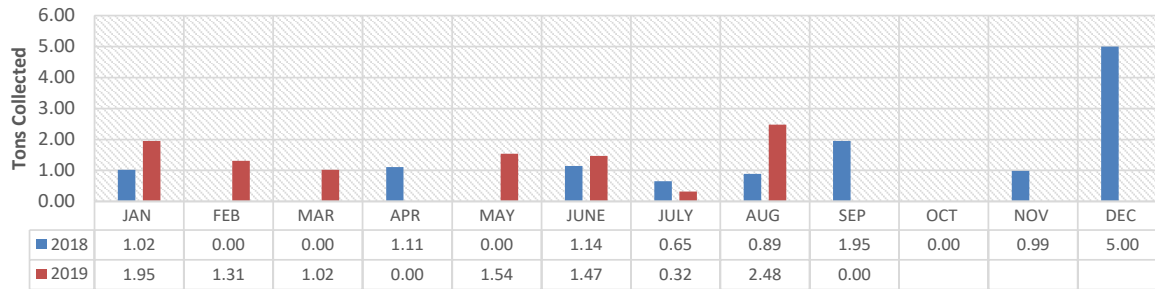
### Recycled Plastic



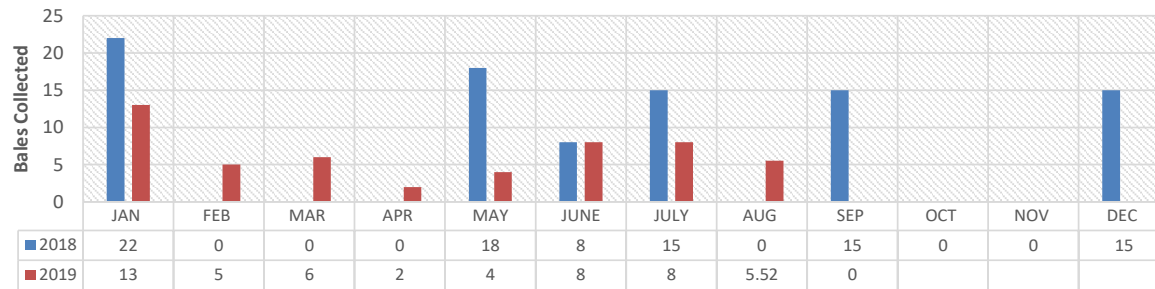
### Recycled Glass



### Recycled Aluminum



### Recycled Cardboard



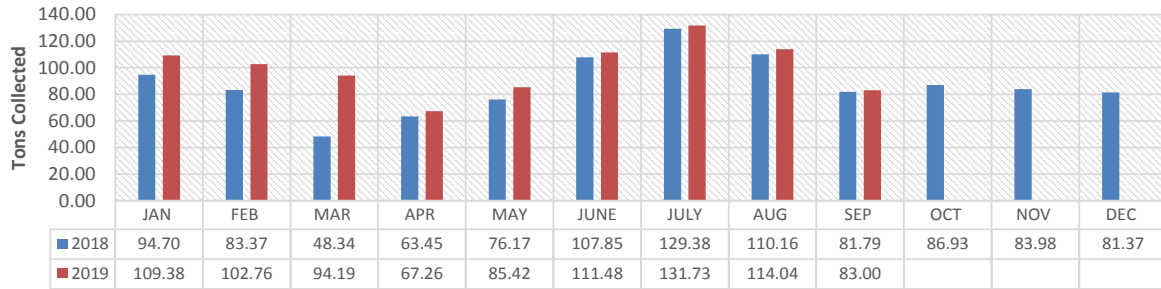


Town of Beech Mountain  
Public Works Department  
Monthly Report

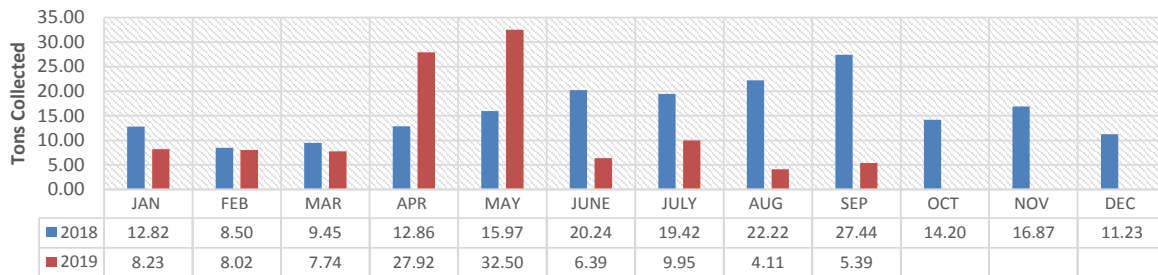
2018	SOLID WASTE	CONSTRUCTION MATERIAL	RECYCLING						--ROAD MAINTENANCE--					
			RECYCLED METAL	PAPER	PLASTIC	GLASS	ALUMINUM	CARDBOARD	ROADS GRADED	STABILIGING STONE	POT HOLES REPAIRED	WASH OUTS	DITCHES PULLED	ROADWAYS MOWED
JAN	94.70	12.82	1.16	0.85	0.76	3.53	1.02	22	0	0	0	0	0	0
FEB	83.37	8.50	1.95	0.66	0.51	0.00	0.00	0	0	0	0	0	0	0
MAR	48.34	9.45	2.69	0.48	0.24	0.00	0.00	0	0	0	0	0	0	0
APR	63.45	12.86	1.91	1.45	0.44	2.84	1.11	0	0	0	10	0	0	9
MAY	76.17	15.97	2.30	0.87	0.46	0.00	0.00	18	22	1	8	5	0	53
JUNE	107.85	20.24	6.90	1.83	1.14	4.08	1.14	8	7	0	3	10	1	31
JULY	129.38	19.42	2.39	1.16	1.04	3.57	0.65	15	4	1	10	0	0	25
AUG	110.16	22.22	4.68	0.98	0.86	3.59	0.89	0	27	0	7	6	0	6
SEP	81.79	27.44	5.21	2.49	0.71	3.97	1.95	15	34	1	3	5	0	7
OCT	86.93	14.20	2.40	2.13	1.08	0.00	0.00	0	4	2	0	9	0	0
NOV	83.98	16.87	2.63	1.19	0.49	4.36	0.99	0	3	2	5	2	0	0
DEC	81.37	11.23	5.00	5.00	5.00	5.00	5.00	15	11	2	0	8	0	0
YTD TOTALS	1047.49	191.22	39.22	19.09	12.73	30.94	12.75	93	112	9	46	45	1	131
2019	SOLID WASTE	CONSTRUCTION MATERIAL	RECYCLING						--ROAD MAINTENANCE--					
			RECYCLED METAL	PAPER	PLASTIC	GLASS	ALUMINUM	CARDBOARD	ROADS GRADED	STABILIGING STONE	POT HOLES REPAIRED	WASH OUTS	DITCHES PULLED	ROADWAYS MOWED
JANUARY	109.38	8.23	2.24	1.25	0.56	3.54	1.95	13	0	0	0	2	1	0
FEBRUARY	102.76	8.02	1.94	2.18	0.60	2.47	1.31	5	11	5	2	0	4	0
MARCH	94.19	7.74	6.14	1.68	0.40	2.12	1.02	6	9	2	0	0	10	0
APRIL	67.26	27.92	2.90	0.00	0.95	0.00	0.00	2	0	0	12	1	1	0
MAY	85.42	32.50	4.60	1.51	1.03	2.96	1.54	4	5	2	7	4	2	11
JUNE	111.48	6.39	2.00	1.05	0.65	4.39	1.47	8	45	4	6	12	22	30
JULY	131.73	9.95	3.25	1.16	1.07	2.86	0.32	8	20	3	3	2	4	12
AUGUST	114.04	4.11	0.00	1.40	1.18	5.54	2.48	5.52	12	5	0	2	0	16
SEPTEMBER	83.00	5.39	0.00	1.73	0.90	3.24	0.00	0	2	0	12	0	2	0
OCTOBER														
NOVEMBER														
DECEMBER														
YTD TOTALS	899.26	110.25	23.07	11.96	7.34	27.12	10.09	51.52	104	21	42	23	46	69

Note: Sanitation & Recycling amounts are reported in tonnage  
 Note: Recycled metal taken to Omni Source  
 Note: Cardboard is by bales - each bale is approx 900 lbs.  
 Note: Began tracking construction material Jan 2018  
 Note: Construction material is charged at \$53.00 per ton

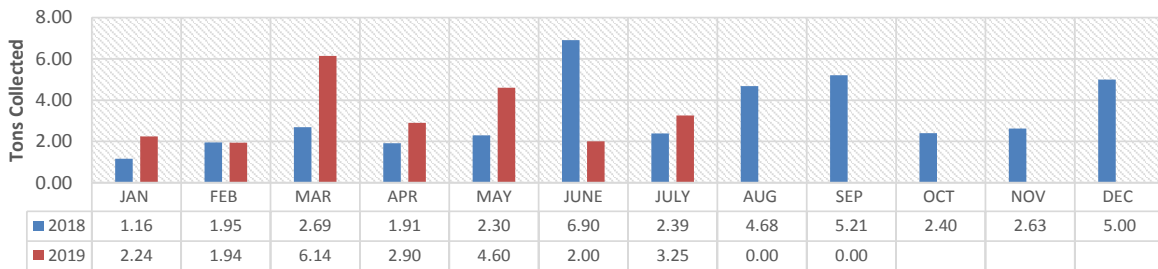
### Solid Waste



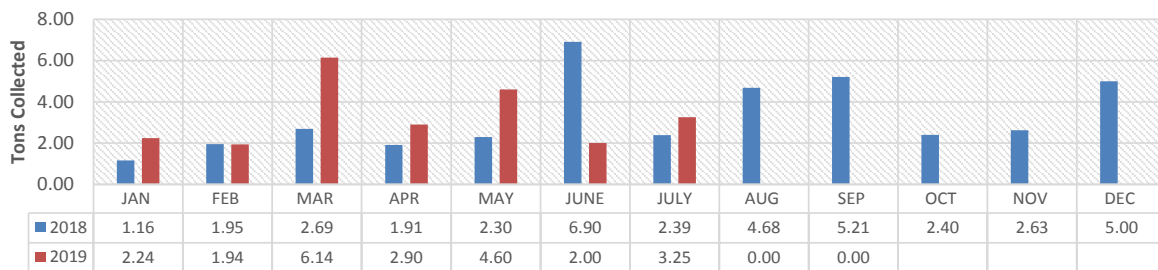
### Construction Material



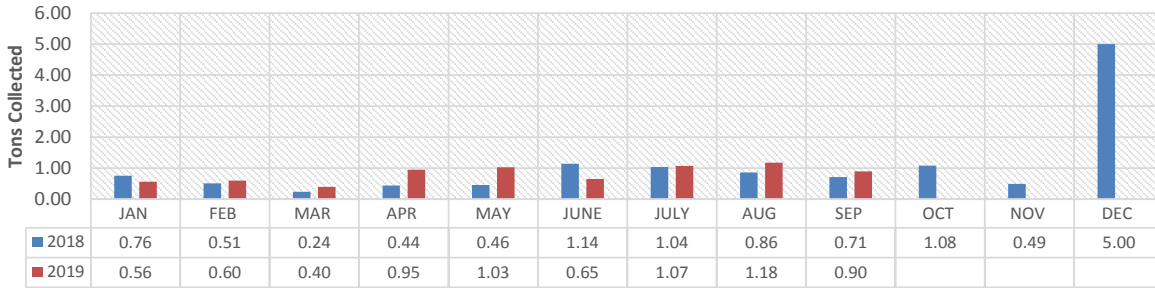
### Recycled Metal



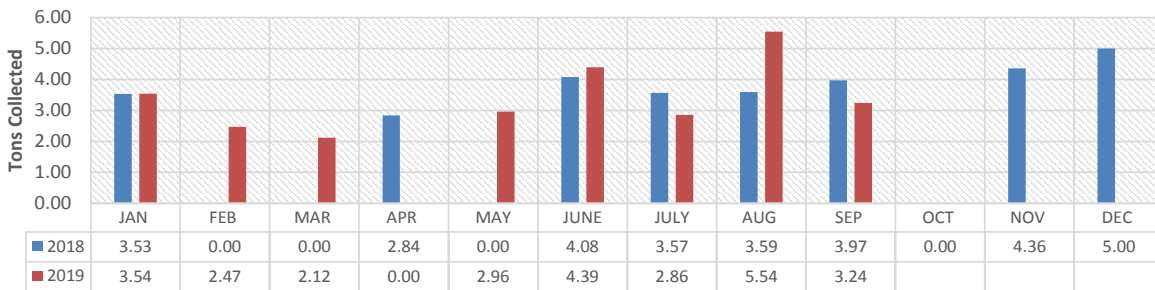
### Recycled Paper



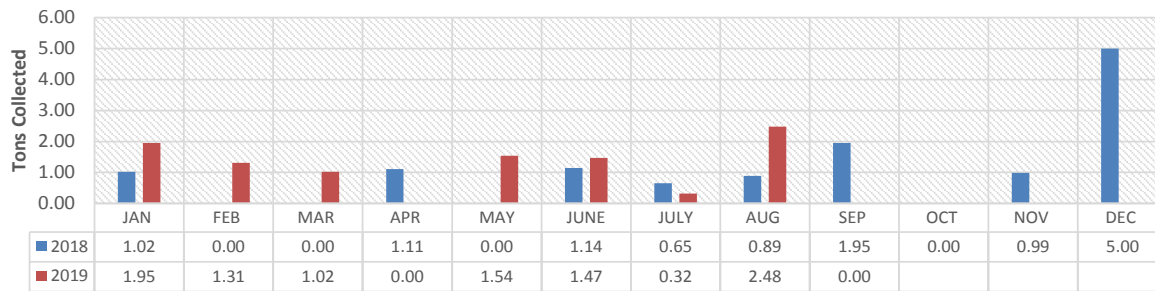
### Recycled Plastic



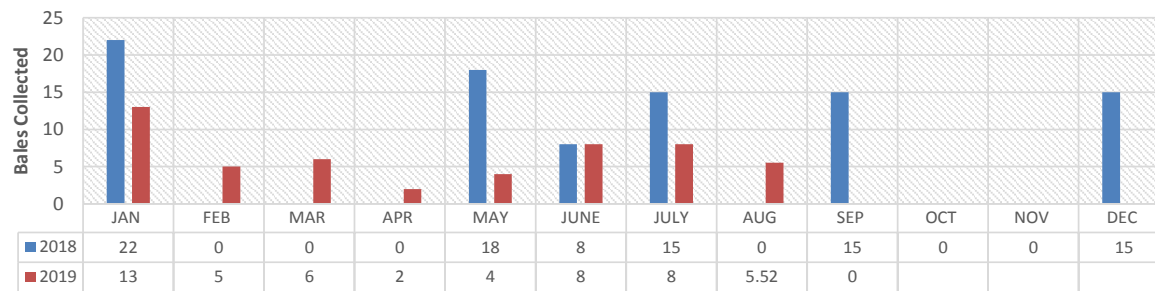
### Recycled Glass



### Recycled Aluminum



### Recycled Cardboard



**JANUARY 2018 PUBLIC WORKS MONTHLY DETAIL**

<b>ROAD NAME</b>	<b>STABILIGING STONE</b>	<b>POT HOLES REPAIRED</b>	<b>WASH OUTS</b>	<b>DITCHES PULLED</b>	<b>ROADS MACHINED</b>	<b>ROADWAYS MOWED</b>	<b>SPECIAL PICKUPS</b>
Weed of 1/04/18							1
Week of 1/11/18							3
Week of 1/18/18							2
Week of 1/25/18							6

FEBRUARY 2018 ROADWAY MAINTENANCE							
ROAD NAME	STABILIGING STONE	POT HOLES REPAIRED	WASH OUTS	DITCHES CLEANED	ROADS MACHINED	ROADWAYS MOWED	SPECIAL PICKUPS
Charter Hills Road (upper gravel portion)	✓						
Oz Road	✓						
Beech Mountain Parkway (past Village Road) 2 locations patched		✓					
Skiway Circle (built block wall - major project)			✓				
Skiview Lane (culvert replacement - major project)			✓				
Dogwood Lane #2 (culvert replacement)			✓				
St. Andrews Road				✓			
Grassy Gap Loop				✓			
Pine Ridge Road				✓			
Charter Hills Road (upper gravel portion)				✓			
Tamarack Road				✓			
Wedling Way				✓			
Mariah Circle				✓			
Village Road				✓			
Beech Mountain Parkway (Town maintained portion)				✓			
Briarwood Road				✓			
Pinnacle Ridge Road				✓			
Beech Mountain Parkway (gravel portion)				✓			
Lake Road				✓			
Chestnut Way				✓			
Lakeledge Circle				✓			
<b>Products Hauled</b>							
#9 chat, Maymead, Inc. Mountain City, TN - 297 tons							
ABC stone, Vulcan Materials, Boone, NC - 100 tons							
<b>Special Pickups</b>							
Week of 2/1/18							1
Week of 2/8/18							4
Week of 2/15/18							2
Week of 2/22/18							7

FEBRUARY 2018 ROADWAY MAINTENANCE							
ROAD NAME	STABILIGING STONE	POT HOLES REPAIRED	WASH OUTS	DITCHES CLEANED	ROADS MACHINED	ROADWAYS MOWED	SPECIAL PICKUPS
<b>Special Pickups</b>							
Week of 3/1/18							0
Week of 3/8/18							0
Week of 3/15/18							0
Week of 3/22/18							11
Week of 3/29/18							4

APRIL 2018 ROADWAY MAINTENANCE							
ROAD NAME	STABILIGING STONE	POT HOLES REPAIRED	WASH OUTS	DITCHES CLEANED	ROADS MACHINED	ROADWAYS MOWED	SPECIAL PICKUPS
Clean up of storm damage -							
Trash pickup and storm damage cleanup - Parkway							
Equipment cleanup - maintenance on Peterbilt and CAT backhoe also shop cleanup (rainy day)							
Crew assisted with sewer main clog - major catch basin at Perry Park, blowing ditches							
hauled construction bin, shop maintenance, sanded roads							
water meter install, shoveled ditches, blew ditches after shoveled							
chipped brush, digging futter for generator movment at Town Hall							
Cleaned edges and put gravel on edges of Pine Ridge Road and 2nd crew worked building rock retaining wall at Town Hall for generator							
Sand roads shop maintenance							
heavier snow. Cleaned vehicles 2 men 2 days training paving utility cuts on Lake Road, Christy Way, and the Recycle Center 8 tons							
Picked up brush on brush list - 6 piles 4/19/18							
raked and dressed at Perry Park and at meter replacement							
cleaned all major culverts and catch basins, cleaned up fallen trees from roadways. Maintenance on Pothole Patcher							
Jetted clogged culverts							
cleaned culverts, broomed roads,							
broomed, tamarack road, charter hills, village road, beech mountain parkway, north pinnacle, oz circle,							

brush pickup, dug ditches at town hall for generators, broomed more streets							
worked on paint machine, installed backflow proventer and turned water on for the season at Bark Park, washed trucks, maintenance on pothole patcher							
striped roadways							
<b>Special Pickups</b>							
Week of 4/5/18							1
Week of 4/12/18							4
Week of 4/19/18							2
Week of 4/26/18							7



1
4
2
7

APRIL 2018 ROADWAY MAINTENANCE				
ROAD NAME	STABILIGING STONE	POT HOLES REPAIRED	WASH OUTS	DITCHES CLEANED
striped roadways approx 14 gallons of paint				
mowed roadways				
worked on generator wall at town hall days: ll				
broomed roadways				
helped RT with sewer leak				
mowed along parkway				
graded roads				
5/17 mowing parkway, brush pickup, leak on greenbriar, hauled gravel,				
catch basin on lake road, mowing				
oncall came in to unstop culverts on wild daisy and greenbriar				
new culvert install at wild daisy, side mowing, mowing at pumpstations				
repair storm damage greenbriar, bent creek, pond creek road, brooming stormdamage from roadway, mowing pumpstations				
#1 guy goes to school				
continued mowing around water tanks				
hauled gravel, washout on Pond Creek Road				
continued mowing the Parkway				
Brush list				
waterleak on Greenbriar				
1 at work zone traffic control supervisory school 3 days				
shoveled and cleaned culvers all over the mountain				
patched and repaired Pond Creek Road, Spring Branch Road, Fox Grape Hollow, Wild Daisy				
cleaned up from waterleak at St Andrews that happened Memorial Day				
<b>Special Pickups</b>				

