HISTORIC
Bellefonte
Est. 1795

AGENDA
BELLEFONTE BOROUGH AUTHORITY
Meeting of Tuesday, March 4th, 2025 at 6:00 PM
In-person
The Oak Room, 301 North Spring Street

6:00 PM - CALL MEETING TO ORDER:

PLEDGE OF ALLEGIANCE:
ROLL CALL:

Mr. Beigle	Mr. Falcone
Mr. Brown	Mr. Halderman
Mr. DeLotto	Mr. Johnson
Mr. Eaton	

APPROVAL OF MINUTES: February 6th, 2025

ADDITIONS TO THE AUTHORITY MEETING AGENDA
In accordance with Act 65 of 2021, If a matter is not on the Agenda, the Authority cannot take official action on it with some exceptions. The Authority can act on matters relating to potential or real emergencies. The Authority may add a matter of agency business to its agenda through majority vote. The Authority should state the reason why the action item is being added to the Agenda. **The Authority may vote to add an action item(s) to the agenda**

COMMUNICATIONS ORAL/Public Comment:
Please sign in and state your name and address and what you are speaking about. Please try to limit comments to three minutes maximum.

COMMUNICATIONS WRITTEN:

Proposal from Dr. Parizek re: Studies related to Big Spring wells project. Dr. Parizek is planning to attend to provide an overview of the proposal.
Email – Gene Stocker
Email Exchange – Stage at Talleyrand Committee
Benner Township Water Authority – looking for new contractor.

FINANCE COMMITTEE REPORT:

Budget v. Actual January 2025

ENGINEER REPORT:

Jean Ryan, Barton and Loguidice
Return Activated Sludge (RAS and) Carrier Fluid Pump Replacements. **The Authority may take action to approve the purchase of these pumps from a COSTARS vendor.**

REPORTS – SEWER:

Superintendent's Report February 2025

REPORTS – WATER:

Superintendent's Report February 2025

OLD BUSINESS:

Water Line for Hotel, Length of Service Line, McCrossin Property – updates.
Warehouse at Benner Commerce Park – updates
Logan Greene Water Main warrantee/dedication - updates
Service Line Inventory project update - updates
Tour of UAJA biosolid facility – schedule when weather is better
Tour of Niagara bottling plant – maybe after the holidays
Reply to Spring Township – wells project.
Act 57 Study – Tap Fees for the Corning Line. The previous study is included.
Review of current Rules and Regulations. Staff will try to review the regulations in March and provide mark ups to the Authority.
Masonry Work at Big Spring. Only a portion of the proposed work involves the wall at the Big Spring. The other work will be considered by the Borough.

NEW BUSINESS:

Bellefonte Waterfront Property National Pollutant Discharge Elimination System (NPDES) Permit. Owners notified staff that they had inadvertently left their NPDES permit expire. Riparian zone regulations near waterways had changed after the permit was originally issued. The regulations allow for property located elsewhere to be substituted. The Authority owns an approx. 8-acre parcel next to the Wastewater Treatment Plant that is now considered wetlands. A portion of this property could be designated as the riparian zone for the Bellefonte Waterfront Project. See the attachment. The owners of the Bellefonte Waterfront property are asking if the Authority would approve a portion (approx. 4 acres) of the property to be used as the designated Riparian Zone. **The Authority may take action on this request.**
Daily Water withdrawal February 2025
Act 57 Study – consider updating the Corning Line Tap Fee/Rate Fee Study
Rockview Penitentiary potentially shutting down.

AROUND THE ROOM:

Motion to Adjourn: _____ Second: _____ ADJOURNED @: _____

Executive Session

BELLEFONTE BOROUGH WATER AUTHORITY
MEETING MINUTES
REGULAR MEETING
February 6, 2025 – 6 p.m.
301 N. Spring Street, Suite 200
Bellefonte, PA 16823
www.bellefonte.net

CALL TO ORDER
The meeting was called to order February 6, 2025 at 6 p.m.

PLEDGE OF ALLEGIANCE

ROLL CALL Authority members present:
Mr. Joe Beigle
Mr. Greg Brown (EXCUSED)
Mr. Dan DeLotto
Mr. Jon Eaton
Mr. Joe Falcone
Mr. Frank (Buddy) Halderman
Mr. Doug Johnson

Staff
Mr. Frank Noll, WWTP Superintendent
Mr. Matt Auman, Public Works Superintendent
Ms. Julie Brooks, Public Works Assistant Superintendent
Mr. Ralph Stewart, Borough Manager
Engineer Jean Ryan via Zoom

Guests None

MINUTES
A motion was made by Eaton and seconded by Falcone to approve the minutes from January 7, 2024. No discussion. Motion carried.

ADDITIONS TO AGENDA
NONE

PUBLIC COMMENT/COMMUNICATIONS- ORAL
NONE

COMMUNICATIONS (Written)

Letter from Spring Township - re: Wells Project

- The Authority will respond to the letter

Mr. Tom Bathgate with Stage Committee – re: Wells Project

Communications—reps of Stage Committee communicating directly with Borough Authority Engineer. Authority took action to address this issue.

FINANCIALS (Mr. Falcone)

Budget v. Actual December 2024 (annual report)

- Water side – net loss $170,000 (revenues were under and engineering expenses)
- Wastewater side – revenue of $1,000,089

There was no motion or vote to approve the financial report.

ENGINEER'S REPORT (Jean Ryan, Barton and Loguidice)

Water:

- working on the Valentine Road plans.
- no report about the hotel or warehouse this month

Wastewater:

- Info gathering for the Chapter 94 and Initial Pre-Treatment reports
- Finalized and updated permits and drafted cover letters for the permits regarding the quarterly PFAS sampling requirements for industrial users.
- Next meeting Jean will have contractor pricing for installing the replacement RAS (Return Activated Sludge) pumps

Big Spring Cover Project:

- Moving forward with the proposal from Dr. Parizek for a temperature study
- Should the engineers move forward with the Sourcewater Assessment? (Paper exercise only. The Sourcewater study would look into/mapping surrounding businesses/structures/land uses - cost estimated at $25,000)

SEWER REPORT (Superintendent – Frank Noll)

The Superintendent highlighted the details of various projects and repairs completed in January 2025.

- Bulk Water sales for January were 43,800g
- Both heating units were replaced last month in the pre-treatment building.
- EDMR report was filed with DEP and the Gear 2 report to PSU on 1/23
- An operator gave notice that he is leaving his position on February 7, 2025.
- January 22-30 hauled 238WT to the Wayne Township Landfill

WATER REPORT (Superintendent - Matt Auman)

Details were offered regarding projects and repairs completed in January 2025.

- 29 PAONE calls
- Installed 25 new water meters
- Niagara - 186,000g

OLD BUSINESS

- Water Line for Hotel, Length of Service Line, McCrossin Property – No update
- Warehouse at Benner Commerce Park – No update
- Logan Greene Water Main warrantee/dedication – No update
- Big Spring Cover Project – work session held on January 28th
- Service Line Inventory project update - updates
- Tour of UAJA biosolid facility – schedule when weather is better
- Tour of Niagara bottling plant

NEW BUSINESS

Discuss Proposal from Dr. Parizek – temperature study related to Well Project (to be received by the meeting date). As soon as this proposal is received, it will be sent out to the Authority.

Chemical Bid Opening (liquid Alum).

- The Authority may take action to have bids reviewed and awarded.
  - Chemco Inc – NO BID
  - USA Alco - $6,338.70/4,500g load OR $1.4086/g (currently paying $1.382/g)

  Eaton motioned to accept/approve the bid contract and Falcone seconded. Motion to accept the contract carried.

Change to Borough Fee Schedule – related to Water System. Consider approval of adjusted fees. (Cost of water heaters increased)

Falcone motioned and Eaton seconded to accept the change to the Borough Fee Schedule. Motion carried.

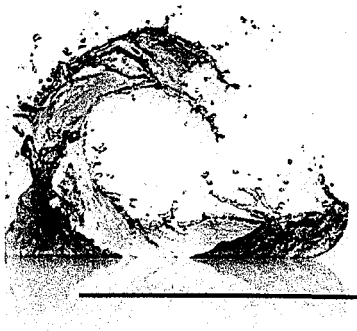
Daily Water withdrawal January 2025

DISCUSSION

Discussion regarding masonry work on the wall around the Big Spring – cost estimates need to be broken out – borough work and Authority (Big Spring) work separated.

ADJOURNMENT

Eaton motioned and Falcone seconded to adjourn tonight's meeting. No discussion. Motion carried. Meeting adjourned at 6:55pm.



BENNER TOWNSHIP WATER AUTHORITY

170 Irish Hollow Road, Bellefonte, PA 16823
PHONE: (814) 355-4778
FAX: (814) 355-1599
www.bennerwater.com

Bellefonte Borough Water Authority

236 West Lamb Street

Bellefonte, PA 16823

February 26, 2025

To whom it may concern,

Due to the unexpected cancellation of our 18-year contract with Spring – Benner – Walker Joint Authority, Benner Township Water Authority is in dire need of an outside contractor to take over the daily duties of operating, maintenance and testing of our domestic water systems. All administrative duties would also be required. (Please see the attached list of administrative requirements provided by SBWJA.) SBWJA is willing to help with the transition to a new contractor. Our time is very limited. We have approximately two months to make significant progress in finding a replacement contractor.

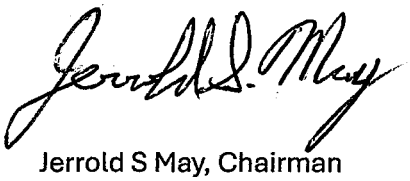
We are contacting you to inquire if this is something you may be capable of and interested in taking on. We are currently billed for this work monthly on a time and material basis.

Our current customer base is 267 with a total EDU's of 271. There are three wells, two of which are connected to a combined system with one water tank. This is the Opequan/Hampton Hills system next to the Benner Township Elementary School. The third well supplies the Grove Park system next to the Benner Township Building. This system has its own tank, and we are currently installing a nitrate removal system at this location. Our fourth system is a water distribution system in the village of Peru. The water and testing for this system are provided through an agreement with the Rockview Penitentiary.

We would require a contractor with a Pennsylvania Water Operator's License to take care of all physical installation, repair, maintenance, testing and administrative duties. (Licensing Requirements are attached.) Note: There is a possibility that SBWJA could still take care of billing customers since most are their customers for sanitary sewer service.

Please feel free to contact us with any questions. We appreciate your time in reviewing our situation and look forward to your response.

Sincerely,



Jerrold S May, Chairman

Benner Township Water Authority

Ph: 814-280-1696

Email: jerroldmay54@gmail.com

Administrative duties associated with the Benner Township Water Authority.

1. Update Website (Word Press) as Needed
2. Prepare Quarterly Bills/Mail
3. Accounts Receivable (Collection of Payments/Post to Customer's Accounts)
4. Prepare/Make Bank Deposits
5. Apply Penalties for Late Payers
6. Prepare Late Letters & Water Termination Letters for Non-Payment
7. Accounts Payable (Enter Bills/Pay Bills)
8. Reconcile Monthly Bank Statements
9. Prepare for Monthly Meeting
    A. Prepare meeting agenda (Remember to Upload to Website 24 Hrs. Prior to Meeting to Comply with PA Sunshine Law Act & Email to Township to Post on Door)
    B. Prepare financial reports (Treasurer's Report; Bills by Vendor; Prepaid Bills)
    C. Attend monthly meeting; transcribe meeting minutes.
10. Provide Township with copy of Approved Meeting Minutes from Prior Month
11. Upload Approved Meeting Minutes to Website
12. Provide Financial Information for Auditor to complete Annual Audit & Answer any Questions
13. Handle any Right-to-Know Law Requests
14. Respond to PA One Calls (Maintenance Staff Marks)
15. Process Water Permit Applications for New Service
16. Work with Closing Companies to Provide Final Water Payoff for Property Transfers & Update Customer Information Once Transaction Occurs
17. Answer Phones & Handle all Inquiries (billing questions, changes, customer complaints/issues, etc.)
18. Provide Quarterly Usage (Total of all Customer Meter Readings) to Rockview Personnel for the Village of Peru

Administrative Staff currently completes these tasks that could be handled by the Operator of Record for the BTWA such as:

1. File monthly SDWA-1 Report with the PA DEP for each Water System
2. Update Emergency Response Plan (Annually as Required)
3. Complete Annual Sanitary Survey/System Evaluation Report & File with PA DEP
4. Prepare & File Annual Chapter 110 Reports for each Water System (Water Withdrawal & Use Reporting) with PA DEP
5. Prepare & File Annual Consumer Confidence Report with the PA DEP for each water system. Ensure Delivery to each affected customer.
6. Compare Quarterly Water Readings (Customer Usage) with Water Pumped for each system to Determine if there are any possible leaks.

Benner Township Water Authority

PA Public Water System ID#s and Licensing Requirements.

The BTWA operates under two separate Public Water ID Numbers, 4140131 and 4140133.

Minimum Licensing Requirements per PA DEP:

Hampton Hills/Opequon System: Class WC with subclasses 7 and 12.

Grove Park: Class WD with subclasses 12 and 9 (required for nitrate removal system.

Ralph Stewart

From: WILBUR STOCKER <gypsy11@prodigy.net>
Sent: Tuesday, February 25, 2025 12:18 PM
To: Adam Smeltz
Cc: Steve Dershem; Matt Brennan; Rep. Paul Takac; Lindsay Schoch; Ralph Stewart; Kathy Evey; Adam Brumbaugh; Rick Weyer; Jason Floyd; Christine Line; Mark Cuker
Subject: Re: Centre County awarded $468K for road, realignment projects

It's disgusting that resources are being spent to make Bellefonte's Big Spring prettier and to improve roads off of Shiloh road to make it easier and less expensive for developers who should be picking up the tab. All this while Walnut Grove Estates still does not have clean public water and has never had any health screening. PFAS is known to cause cancer and early detection is vitally important for effective treatment
One of our neighbors died suddenly and unexpectedly a few weeks ago. The Medical Examiner's office will not release the results of the autopsy to his WIFE. The Pa Dept of Health has never knocked on any of our doors. So many concerns but we GOTTA make that spring prettier, we GOTTA spend tax payer dollars to accommodate development on Shiloh and spend million to have SBWJA sewer Shiloh Road when UAJA is located a few hundred yards away. In the process we have to put sewer into Walnut Grove Drive where it's not needed rather than building a water line into the development. This is outrageous .

Gene Stocker

Sent from AT&T Yahoo Mail for iPhone

On Tuesday, February 25, 2025, 10:46 AM, Adam Smeltz (Grine) <asmeltz@gmail.com> wrote:

> Thanks for flagging this and the story about prospective new water sources for Bellefonte. Very interesting where the money goes. And about the possible new water sources for Bellefonte — makes you wonder if the borough's exploration includes any areas that might be affected by PFAS contamination, whether below the surface or from sewage sludge.
>
> Thanks again. Hope you're doing well.
>
> On Mon, Feb 24, 2025 at 9:58 PM Gene <gypsy11@prodigy.net> wrote:
>> Isn't this great. New roads to subsidize developers but still no water for Walnut Grove Estates.
>>
>> **NewsBreak**
>> Used by over 45 million people
>>
>> Open APP
>>
>> ## Centre County awarded $468K for road, realignment projects
>>
>> WTAJ
>>
>> Centre County awarded $468K for road, realignment projects Source: WTAJ
>>
>> Click to read the full story

Please excuse grammatical errors as this was sent from my iPhone. Have a great great day!

--
Adam Smeltz
asmeltz@gmail.com
Mobile: (814) 571-4238
Twitter: @asmeltz

Ralph Stewart

From: Rick Jacobs <rjacobs@talogy.com>
Sent: Friday, February 7, 2025 4:21 PM
To: Ralph Stewart
Cc: Frank Halderman; Doug Johnson; Jean Ryan; TABathgate70@gmail.com; Tom Wilson; Holly Wilson
Subject: RE: Direct Contact with Authority Engineer

Ralph, after all these years of knowing each other I believe it would have been far more effective for you to have picked up the phone or asked me to come in to talk about the issues. To that end, I would like to meet with you next week to discuss your email and beyond. Please let me know your availability for a meeting.

Here are my thoughts about your email from this morning and what I want to discuss:

1. As a citizen of the Borough, I have every right to seek out information that impacts me, my family, and the broader community, which includes our project for a Stage in Talleyrand Park. The Borough and/or the Water Authority cannot deny me that right. Your wording of this morning's email is dangerously close to violating my rights, "Please discontinue any and all direct communications with any of the consultants working on behalf of the Borough Authority."

2. As a consultant to the Water Authority, Jean and her team have every right to ask you if they should respond or if you want to respond to such inquiries. You have every right to instruct Jean not to respond and you can respond if you so choose, or do nothing, which apparently is exactly what happened after my note of January 9 of this year. My simple question regarding any flexibility regarding placement of the wells is still unanswered.

3. Over the past month, I have made no attempt to pursue an answer from Jean, the Borough or the Water Authority. My conclusion was she was instructed not to respond and I respected that decision. I got that undelivered message and that is why there have been no further attempts, making your email this morning unnecessary and offensive. I will drop it for now but I am curious regarding the legality of a public official making the

statement you made. I believe the Borough spent time and energy last year dealing with an attempt to cutoff public dialogue.

4. Interestingly enough, it was your email to me, copying Jean on November 8, 2024 that provided me with her email address and the ability to reach out. Providing her email address indicated to me that I could contact her. If it was your intent for me to only go through you, I see including her email as your error.

5. After your email of this morning (see below) please find a complete accounting of the emails I have sent to Jean pertaining to the project. I have been told by others on the Stage Committee that they have not contacted Jean regarding the project. As you can see during your review of the emails, there is really no request for information beyond basic, simple information.

6. Finally, I am formally requesting time with the Borough Council, either during a work session or a regular meeting to present where we are with the Stage project. I will provide a full packet of information prior to the meeting so the Council Members can review before my presentation. Following that meeting, at the first available Council meeting, the committee would like a formal vote, Yes or No, on whether we can move forward with our project.

CONFIDENTIAL

From: Ralph Stewart <rstewart@bellefontepa.gov>
Sent: Friday, February 7, 2025 10:23 AM
To: Rick Jacobs <rjacobs@talogy.com>
Cc: Frank Halderman <fhalderman@comcast.net>; Doug Johnson <djohnson@bellefontepa.gov>; Jean Ryan <jryan@bartonandloguidice.com>
Subject: Direct Contact with Authority Engineer

Hello Rick,

Last evening, the Authority discussed an issue that they were made aware of. That issue is you and possibly your fellow Stage representatives directly communicating with the Authority's engineer. The Authority wants you to know that that practice is not acceptable. The Authority is the body that sets the policies and rates for the Bellefonte Water System and

accordingly, gives direction to any of the consultants that are paid by the Authority. Please discontinue any and all direct communications with any of the consultants working on behalf of the Borough Authority.

You are welcome to communicate directly with the Borough Authority should you have a question or concern.

Thank you very much!

Ralph

—
Ralph W. Stewart, Borough Manager
Borough of Bellefonte
301 North Spring Street STE 200
Bellefonte PA 16823
Phone: 814-355-1501 x214

Sent to Jean on 1/9/2025

Hi Jean, thanks for the informative presentation. The proposed well sites do not appear to create a problem for our proposed stage. The only well that is close to where the stage will go is the one that is closest to the park's walking track and the match factory/railroad tracks. If that could move a bit away from the very corner of the park, I believe we would be clearly out of the way. Is that possible?

Rick Jacobs, PhD

Emeritus Professor of Psychology, College of Liberal Arts
Distinguished Honors Faculty, Schreyer Honors College
Board of Directors, Presidential Leadership Academy

Penn State University

237 West Linn Street
Bellefonte, PA 16823
814.769.9028
Time Zone: Eastern

Email: rrj@psu.edu

Sent to Jean on 1/6/2025

Directly behind the Pelican Snow Cone building, in that corner.

Sent from my iPad

Rick Jacobs, PhD
Emeritus Professor of Psychology, Penn State
Science Advisor, Talogy

rjacobs@talogy.com
814.769.9028

On Jan 6, 2025, at 11:52 AM, Jean Ryan <jryan@bartonandloguidice.com> wrote:

Rick,

We will be presenting the findings from the geophysical survey at tomorrow's board meeting. As soon as these are presented to the board, I will send you the information that was presented. I can tell you that we did locate with confidence where the water is coming from. This means we do now know the area in which we will need to put any wells that may be constructed.

Where exactly in the Southeast corner were you looking at? That is near the existing spring correct?

Jean Ryan
Managing Engineer
Water Resources

Barton&Loguidice
Email: jryan@bartonandloguidice.com
Website | LinkedIn | Twitter | Facebook | Vimeo

From: Rick Jacobs <rjacobs@talogy.com>
Sent: Monday, January 6, 2025 11:32 AM
To: Jean Ryan <jryan@bartonandloguidice.com>
Subject: Talleyrand Park

Hi Jean, Happy New Year. I'm wondering if you can give me information regarding the work you are doing for the Water Authority and Borough. Our group is especially interested in whether your findings have a bearing on our plan to build the stage in the southeast corner. We are anxious to finish our fundraising and get on with the project, pending approval from the Borough.

Please let me know. Thanks.

Rick Jacobs, PhD

Emeritus Professor of Psychology, College of Liberal Arts
Distinguished Honors Faculty, Schreyer Honors College
Board of Directors, Presidential Leadership Academy

Penn State University

<image001.jpg>

237 West Linn Street
Bellefonte, PA 16823
814.769.9028
Time Zone: Eastern

Email: rrj@psu.edu

Sent 12/13/2024

Hi Jean. Any update on the work at Talleyrand Park. We are hopeful you will have an answer to if our plan for the stage is workable given the project to uncover the Big Spring and the associated wells.

Thanks.

Rick Jacobs, PhD

Emeritus Professor of Psychology, College of Liberal Arts
Distinguished Honors Faculty, Schreyer Honors College
Board of Directors, Presidential Leadership Academy

Penn State University

237 West Linn Street
Bellefonte, PA 16823
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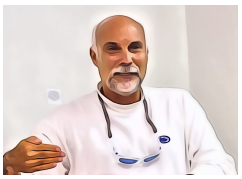
Email: rrj@psu.edu



Received. Rick, thank you for sending the information. I have passed it on to my team working on this. If anything comes up in the meantime, please feel free to reach out.

Have a great weekend everyone!

Jean Ryan
Managing Engineer
Water Resources

Barton&Loguidice
Email: jryan@bartonandloguidice.com
Website | LinkedIn | Twitter | Facebook | Vimeo

From: Ralph Stewart <rstewart@bellefontepa.gov>
Sent: Friday, November 8, 2024 1:53 PM
To: Rick Jacobs <rjacobs@talogy.com>
Cc: Jean Ryan <jryan@bartonandloguidice.com>
Subject: RE: One more small request

Sure Rick, no problem.

Hi Jean,
Rick wanted to make sure you have his email in case you have questions.

Thanks,
Ralph

—
Ralph W. Stewart, Borough Manager
Borough of Bellefonte
301 North Spring Street STE 200
Bellefonte PA 16823
Phone: 814-355-1501 x214

BOROUGH OF HISTORIC Bellefonte

From: Rick Jacobs <rjacobs@talogy.com>
Sent: Friday, November 8, 2024 1:41 PM
To: Ralph Stewart <rstewart@bellefontepa.gov>
Subject: One more small request

Hi Ralph, I very much appreciate you sending the materials to Jean. Can you make sure she has my email address in the event she has any questions? Thanks.

Rick Jacobs, PhD

Emeritus Professor of Psychology, College of Liberal Arts
Distinguished Honors Faculty, Schreyer Honors College
Board of Directors, Presidential Leadership Academy

Penn State University

Science Advisor

psi Testing Excellence

TALOGY

237 West Linn Street
Bellefonte, PA 16823
814.769.9028
Time Zone: Eastern

E: rjacobs@talogy.com

Richard R. Parizek,
Emeritus Professor of Geology and Geo-Environmental
Engineering, The Pennsylvania State University
President
Richard R. Parizek and Associates
751 McKee Street
State College, Pennsylvania 16803
February 9, 2025

Ralph Stewart, Borough Manager
Borough of Bellefonte
301 North Spring Street STE 200
Bellefonte, Pennsylvania 16823

Dear Ralph,

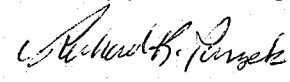
Please find enclosed the budget estimate for three tasks outlined in my proposal emailed to your office just before Thursday's meeting. There were uncertainties about available equipment and costs for some items needed for work as outlined. There may be other services, supplies and equipment that Bellefonte might provide that will reduce costs for one or more of the tasks indicated.

Please note, the section added regarding worker safety and concern for auger damage to buried utilities. Is an accurate utilities map available for the proposed prospect area? If not, would the Borough Engineer conduct the necessary search program? We could do this study along lines where auger holes are planned. However, utility companies, excavation contractors and others may have more sophisticated equipment and experience to undertake this important work.

I will conduct several trial VLF surveys at known and varied utility sites elsewhere to get a better idea of their radius of detection and influence using a Ronka EM16 meter. We could decide which parcels might be large enough to be included in the VLF survey. Alternatively, TASK C might be terminated or not begun if the prospect area is found to be too cluttered with utilities.

Please call to arrange for a follow-up discussion on my proposal and issues of concern to Bellefonte Borough and/or Barton & Loguidice.

With my personal regards,



Richard R. Parizek, Emeritus Professor of Geology and Geo-Environmental
Engineering, The Pennsylvania State University
President
Richard R. Parizek and Associates

PROPOSAL: BIG SPRING UNCOVERING STUDY

FRACTURE TRACE, LINEAMENT, SHALLOW SOIL TEMPERATURE AND VLF SURVEYS TO LOCATE POTENTIAL PRODUCTION AND MONITORING WELLS

February 5, 2025

Richard R. Parizek
Emeritus Professor of Geology and Geo-Environmental Engineering, The Pennsylvania State University
President
Richard R. Parizek and Associates
751 McKee Street
State College, Pennsylvania
16803
rrp1@psu.edu
(814) 321-4790 cell phone

Budget Provided on
February 9, 2025

INTRODUCTION

At the request of Bellefonte Borough, Richard R. Parizek and Associates proposes to undertake three independent but relevant tasks intended to compliment the work of Barton & Loguidice that could lead to uncovering Bellefonte's Big Spring. Sites for high yielding replacement supply wells and monitoring wells would be required to meet Bellefonte's 5 mgd and Milesburg's public and commercial bottling works 1.65 mgd allocations.

Compelling physical and chemical evidence was provided to the Committee that was used to confirm the recharge area for Big Spring. It includes the areas underlain by nearly 1,700 feet of the Sandy Gatesburg Dolomite that extends from outcrops along Logan Branch toward State College Regional Airport, the Barrens to the Scotia Range and beyond.

By contrast, near field groundwater flow paths that lead to the Big Spring pool are unknown. Areas of concentrated water emergence within the spring pool were defined using geothermal and other observations. These were shared with the committee during my invited talk. Although more concentrated in flow points were limited to only a small portion of the spring pool, as groundwater ascends along these rather narrow, deep bedrock fissures, it might spread over a larger area of the pool compared to the width of fissures as it encounters other shallow joints and fractures and overlying less permeable sediments that underlie the spring pool.

Two more regional pathways for Gatesburg groundwater to reach vertical bedrock fissures that nourish the spring were presented to the Committee. These two conceptual groundwater flow path models are briefly described below.

CONCEPTUAL MODEL I

Regional groundwater flows are northeastward parallel to stratigraphic strike (trend) of the dipping beds of the Gatesburg Sandy Dolomite, its anticlinal axis and the Birmingham thrust fault proceeding from the Gatesburg's extensive recharge area in the Barrens, Toftrees, State College Airport region. Groundwater flow continues at depths below Spring Creek before encountering deep fracture zones revealed by the Logan Branch Lineament. Although some of this water sustains Kelly and other springs and seeps along Logan Branch below the former Cerro Brass Factory, most of Gatesburg groundwater flows turn northwestward along the Birmingham Lineament structure to Big Spring. Younger dolomite and limestone strata would have to confine most of this groundwater for it to resurface within Big Spring far from the known occurrence and exposure of the Gatesburg Formation. This model requires Big Spring water to arrive from the southeast of its pool (the fountain side).

CONCEPTUAL MODEL II

The Gatesburg Dolomite recharge area is the same as that for Model I. However, most groundwater would then flow north- northwestward across the Birmingham Thrust fault, the steeply dipping Stonehenge Limestone and Bellefonte Dolomite, before passing below Spring

Creek near Fisherman's Paradise and Logan Branch before encountering permeable Logan Branch lineament structures from the southwest. Then, flow is directed upward into Big Spring along a small section of the Logan Branch Lineament. The vertical flow path to Big Spring is the same for both models.

PROPOSED INVESTIGATION

The proposed hydrogeologic site characterization investigations that follow includes three tasks to help select test-well and monitoring-well sites that are more likely to encounter highly productive fracture pathways to nourish Big Spring whether water arrives from a northwestward (Model I) or northeastward (Model II) direction. The success of potential spring-source replacement wells will depend on knowingly which are the dominant pathways to Big Spring and drilling into it (them) with at least two high capacity wells.

TASK A FRACTURE TRACE AND LINEAMENT ANALYSIS

1. Using multiple ages of stereo-pared aerial photographs, and satellite images, map fracture traces and the inferred center line of a lineament, herein referred to as the Logan Branch Lineament. Near vertical fracture zones revealed by this lineament extend from near the base of Nittany Mountain, across Nittany Valley, across Bald Eagle Mountain, Bald Eagle Valley and extend along the Allegheny escarpment to the northwest. These zones of fracture concentration account for the incision of Logan Branch at a near right angle to the trend (stratigraphic strike) of nearly 5,350 feet of fold and faulted variably erosion-resistant limestone and dolomite strata within Nittany Valley. It also extends within shale, siltstone, sandstone and limestone sequences proceeding across Bald Eagle Mountain, Bald Eagle Valley and along the Allegheny Escarpment to the northwest.

Fracture traces, by contrast, define rather narrow zones of fracture concentration, (less than 3 to around 40 feet wide), that are generally less than a mile in length. Given their shorter and often subtle nature, their diagnostic features are easily obscured by landuse and landscape changes, hence are less likely to be visible within the urbanized area near Big Spring. Given availability of 1939, 1949, 1963 and other vintage stereo-paired aerial photographs and my many years of experience mapping these structures within diverse geologic landscapes, land uses, soil and vegetative cover, this effort is recommended as an important step when selecting well sites. By request, more information will be provided on the fracture trace prospecting method, first ever documented by L.H Lattman and R.R. Parizek and published in 1964.

2. Search for LIDAR and other satellite platforms for alternate, independent evidence in support of Big Spring's location with respect to the Logan Branch Lineament and support of Barton & Loguidice's selection of potential water-supply replacement and monitoring well sites.

3. Overlay potential fracture traces and the Logan Branch Lineament on a suitable scale project base map within the vicinity of Big Spring.

4. Stake potential test well sites should one or more fracture traces be identified within the vicinity of Big Spring and/or fracture zones related to the Logan Branch Lineament.

5. Prepare an analysis report with recommendations.

6. Share timely results of the TASK A investigations with Bellefonte and Barton & Loguidice.

7.Adjust and/or add additional TASK B soil temperature traverses to include fracture zones discovered during TASK A efforts.

Various ages of stereo-paired aerial photographs will be used in search of fracture-trace remnants that might still be visible. Several remote sensing platforms will be used in hopes of refining elements of the Logan Branch Lineament in the immediate vicinity of Big Spring and their relationship to fracture-trace structures that might be identified.

TASK B. SHALLOW SOIL TEMPERATURE GEOPHYSICAL SURVEY

Thermal groundwater and surface water-anomalies together with other observations were used to identify more concentrated groundwater entry areas within the pool of Big Spring. Other successful applications of geothermal surveys for groundwater exploration were presented to the Committee members during my presentation. Work required for TASK B follows.

1. Lay out soil temperature survey lines that include one or two lines southeast of the spring (near the fountain), a line along the southwestern side of the spring and along two northeast-southwestern lines. Flag and number each drill site.

2. Consult with the Borough Engineer to identify location and types of buried utilities known to be located within the prospect area. Confirm that Bellefonte does not require permits for such shallow holes as does Penn State University.

3. Tag, number and drill 3-foot deep temperature access holes along each line. White PVC comes in 10-foot lengths, hence, three hole liners can be cut from each pipe. This will allow the top of pipes to have a 0.3 ft. stick-up and space for caps. Twenty-foot lengths also are available. Black PVC will absorb solar energy more so than white PVC, hence must be avoided for this project.

4. Hammer drill holes to 3 ft. at 3 ft. spacing along each survey line. A shallower depth may be justified if boreholes will not stay open of if some penetrate the water table and others do not along survey lines. This could skew interpretations.

5. Every third hole or so will be hand-augured to allow characterization of soils along each survey line. Spacing between auger holes will be increased where soil is likely to have similar characteristics.

6. Collect and describe all auger soil samples, prepare graphic logs for each hole and display results on cross-sectional profiles and maps where temperature data also are provided.

7. Set PVC liners, open on the bottom and capped on top. Number all holes.

8. Backfill the annular space around each PVC liner using auger returns and/or fine textured play sand to prevent channeling of surface water and air to measurement depth.

9. Multiple bucket auger holes placed along each survey line will be used to determine the depth to water table and stability of soils. Ideally, all temperature- measurement holes should be completed either above or below the water table, not mixed. All measurement points must be open to a common depth. Further, sediment may collapse while drilling below the water-table making it difficult to meet depth specifications. A revised target depth will be selected should these conditions be encountered during early stages of the project.

10. Allow eight to ten days for drilling and installation temperature disturbances to dissipate, i.e., heat of friction induced by drilling, pipe and backfill temperatures when each are set, etc.

11. Obtain the first round of bottom-hole soil temperature measurements, process these data and display them on cross-sectional profiles and maps. From 5 to 10 minutes have been required for bottom-hole soil temperatures to stabilize at some monitoring stations during previous surveys. Thermistors and probes can either heat up or cool down when moving between stations. More time is required for equipment to come to equilibrium during daily weather, temperature extremes.

12. Repeat the temperature survey within 8 to 10 days to validate initial results.

13. Review findings with Bellefonte Authority and Barton & Loguidice technical staff. Consider whether or not establishing additional temperature profiles might be justified or if TASK B should be terminated.

14. Prepare a final project report.

If thermal anomalies are noted, additional lines should be added to more adequately define their size, trend, shape, and locations with the largest temperature anomalies. Given late winter and early spring's cold soil temperature profiles and near constant warm temperature of Big Spring groundwater, warmer soils will indicate more concentrated areas of shallow-groundwater flow. These could be used to guide placement of test and monitoring wells and/or narrow down regions where other geophysical techniques might be applied.

When the temperature survey is complete, with or without positive results, decisions will be made to pull all PVC pipes or if they might be driven deeper into the soil to remove tripping hazards, injury to park visitors, etc. Alternatively, this action could be delayed to allow follow up

temperature surveys to advance this science at no cost to Bellefonte. Time is required for the annual solar (seine) wave to penetrate then dissipate with depth and time of year. Depending upon their strengths, underlying thermal anomalies can be obscured at least two times during the year. Variation in thermal soil properties, water content, etc., influence the rate and depth to which the solar seine wave penetrates soils. Times of the year when shallow geothermal prospecting should be undertaken must avoid these null points.

TASK C VLF SURVEY

The shallow-soil temperature survey method will not reveal deep pathways of concentrate groundwater flow many of which are likely to exist at depths of hundreds of feet. By contrast, very low frequency (VLF) waves operated by the U.S. Navy for world-wide submarine-communications are not depth limited. More conductive hydrogeologic features that are long and linear such as more transmissive solution voids, fault zones, mineralized vein-ore deposits, etc., are but examples. VLF survey areas, however, must be free of man-made conductive interferences such as power lines, buried pipes, tightly drawn straight wire fences, etc. Zones of fracture concentration are water bearing, linear and often more deeply weathered structures. Should thrust faults underlie Big Spring that have displaced Axemann Limestone and Bellefonte Dolomite over shaley limestones or sandstones as documented in the Mobile oil and gas well drilled about 8 miles northeast of Bellefonte, or exposed in the Birmingham thrust-fault window near Greir-School along the Juniata River, their electrical properties will differ compared to limestone and dolomite exposed immediately northeast of the spring and around Bellefonte.

1. A Ronka EM 16 electromagnetic system will be used to measure inclination (in-phase) and quadrature (out-of-phase) values obtained by the EM 16 when crossing suspected elongate target zones of fracture concentration at near right angles e.g. the Logan Branch Lineament or still to be discovered nearby fracture-trace scale structures.

2. Portions of soil-temperature survey lines free of pipes, overhead power lines, rails, metal security fences and streams will be used for the VFL survey.

3. VLF radio signals are scrambled for security reasons. Signals transmitted from stations in Maine and the state of Washington will be used to search for linear electrically conductive water-bearing pathways to Big Spring.

4. Additional lines will be surveyed throughout the extensive lawn area available between the park entrance south of Big Spring, extending to railroad tracks near the former Match Factory, channel and spillway of Big Spring.

5. Additional lines could be added if anomalies are detected or suspected during the survey.

6. Bellefonte Borough Committee Members and Barton & Loguidice technical staff will be briefed during and/or after the VLF survey is complete.

7. A final report will be prepared that includes maps, cross-sectional profiles along survey lines together with interpretations. The Ordinate scale of each traverse will show the in-phase quadrature value expressed as percentages for both positive and negative polarities read from the Ronka EM 16 instrument. The abscissa marked in feet is measured from the starting point (the zero point) of each traverse. The direction of instrument heading will be the same for all plots where survey lines are parallel one to the other.

SCHEDULE

Initial arrangements to undertake one or all tasks outlined above will begin within 8 working days following notice to proceed. Time will be required to acquiring satellite images and older stereo-pared aerial photographs. These can be time consuming to retrieve from USDA archives in Salt Lake City, UT. Satellite images and LIDAR coverage must be acquired.

TASKS B and C can begin on short notice while TASK A photographs and images are being ordered. To reduce costs, auger drilling should be delayed until the area is free of ground frost. Survey lines will be laid out, base maps, field supplies and equipment acquired during this period. Allow 1 or 2 days.

Bellefonte has offered staff support to assist with drilling and auguring temperature access holes and offered to purchase PVC pipes, pipe caps, flagging pins, sand needed to backfill drill holes and related supplies. Given the large number of drill holes and amount of PVC pipe required to maintain open holes, white 3 ft. long, 0.840 inch OD or 0.622- inch ID pipe will be used to line soil-temperature monitoring holes. Three 3.3 ft. sections can be cut from a standard 10 ft. length of PVC pipe. 20-foot lengths also are available locally. Cost reductions also are available when purchasing PVC pipe in bulk. All these preparations can be made while waiting for ground frost to thaw or snow pack to melt from storms expected during February and March.

A Hammer drill can penetrate frozen soil. However, more reliable and representative soil samples can be obtained using a bucket augur that is labor intensive, whereas Hammer drill samples tend to be mixed given the speed and manner of drilling.

VLF surveys will share some geothermal survey lines, other lines will guide only VLF surveys.

Given the differences, uncertainties and demands involved to undertake and complete each task, allow three months to complete all field tasks and a month to finalize all three or a single combined final report.

IDENTIFICATION AND LOCATION OF UTILITIES

Of urgent concern is the safety of work personnel and potential damage to buried utilities that could be encountered by 3-ft. deep auger and impact drill holes. These are required to meet

TASK B geothermal survey objectives. Their depth might be reduced to 2.5-ft., even 2-ft., should the water table be as shallow as 3 ft. or less at some locations within the prospect area. Two foot holes might still be too deep to protect all utility lines. Fencing, sewer, water and French-drain lines and buried and aerial electrical lines are present in the immediate vicinity of Big Spring.

Other than the spring's French drain, similar utility lines are present within the larger prospect area to the southwest, west and northwest of Big Spring. Man hole and other protective covers are present at various locations within these areas suggesting the existence of a rather complex distribution of lines. Electric service lighting lines exist near the figure 8-like paved walkway and entrance gate, and Bellefonte's logging history display. Barton & Loguidice survey line and suggested well location map shows the partial southwestern extent of the buried-enlarged chlorine contact pipe but no extensions that convey treated water to community service connections including the Geno P. Fornicola Memorial Fountain nor the older fountain southeast of Big Spring.

Please advise if existing utility maps are present for this general prospect area or if Bellefonte will undertake this important task.

The TASK C VLF survey will be influenced by buried, surface and suspended conductors, railroad tracks, perimeter fence, etc. Estimate cost for Richard R. Parizek and Associates to conduct these utility surveys is provided.

BUDGET PROPOSAL

TASK A FRACTURE TRACE AND LINEAMENT MAPPING TASK A AERIAL PHOTOGRAPHY/SATELLITE IMAGES.

A. PURCHASES.	**Cost and Delivery Time**
1. Three Ages of Stereo-paired 1: 20,000 scale black and white aerial photographic contact prints, USDA Salt Lake City. Require 6 to 8 overlapping prints on two adjacent flight lines. PASDA free access photographs not available in stereo-pairs.	To Be Determined.
2. Travel and office only use to map fracture traces on multiple ages of stereo-paired aerial photographs in PA Geological Survey Collection, Middleton, PA.	
Travel 3.5 hours	$420.00
Travel 200 miles @ $0.70/mile	$140.00
Meals 2 days @ $55.00/day PA 2025MRIE Allowance	$110.00
Lodging Harrisburg region	$124.00
Purchase of Satellite images not available from PASDA	Cost and Delivery Time To Be Determined.
Estimated Subtotal	$794.00

B. OFFICE AND FIELD WORK **Cost and Delivery Time**

1. Mapping of fracture traces on 3 or more ages of stereo-paired aerial photographs. Same as A(2) above. $3,000.00

2. Mapping in detail, Logan Branch Lineament. $500.00

3. Field identification, evidence for location(s) of zones of fracture concentration defined by details related to Logan Branch Lineament and fracture trace within and near Big Spring prospect area.

a. RRP Not to exceed 9 hours including travel
9 hours @ $120.00/hour $1,080.00

b. KAP Not to exceed 9 hours including travel
9 hours @ $85.00/hour $765.00

c. Travel 40 miles @ $0.70/mile $28.00

4. Preparation of Analysis Report, Findings with Recommendations.

a. Report preparation, editorial work, RRP 8 hours @ $120.00/hr. $960.00

b. Graphics, editorial work, etc., KAP 9 hours @ $85.00/hr. $765.00

c. Word processing, Communications, Office Management, EBP 8 hours @ $ 55.00/hour. $440.00

5. Progress report, technical exchanges with Bellefonte Borough, Barton & Loguidice, DEP, SRBC et. al., RRP 2 hours @ $120.00/hour. $240.00

Subtotal $7,778.00
Total $8,572.00

TASK B SHALLOW SOIL GEOTHERMAL SURVEY

A. PURCHASE/RENTAL

1. Rental of Hammer Drill, Power Auger and Bucket Hand Auger. No charge for use of Bellefonte's hammer drill. $222.00/weekly Bestline rental rate. $200.00*
* No time limit for alternate Hammer Drill.

2. Purchase of 39-inch hammer drill bit (Amazon) needed to complete 3 ft. boreholes or 36-inch Rebar style bit @ $125.00. $39.00

3. Generator including fuel. One week. $200.00

4. 45 10-ft. lengths of white PVC, 1/2-inch O.D. pipe (Total length 415 ft.+) at $4.71/10 ft. length (Home Depot) excluding tax and reduced bulk purchase rate from alternate sources. $212.00

5. 45 1/2-inch PVC caps at $1.31/cap excluding tax.	$58.95
6. Color coded flagging pins to mark auger holes, suspected buried utilities etc. 100 pins @ $16.99 x 2.	$33.98
7. Duck tape, flagging ribbon, permanent marking pens, etc.	$30.00
8. Sandwich bags for auger cuttings, 300 ziploc at Walmart not including tax.	$11.34
9. Powdered or granular Halliburton or other brand, bentonite hole plug, $96.99/ 50lb. bag x 2.	$193.98
10. Fine-grained backfill sand to be mixed with Bentonite.	$25.00
11. Travel to acquire some or all of the above, 35 miles @ $0.70/mile.	$24.50
12. Acquisition supplies and equipment 3 hours @ $120.00/hour.	$360.00
Subtotal	$1,388.75

TASK B FIELD AND OFFICE WORK

1. Acquire supplies and equipment. RRP's efforts depend upon Bellefonte's commitment to acquire some or all of the above.	To Be Determined
2. Lay out temperature survey lines and flag monitoring stations.	
a. Travel 22 miles @ $0.70/ mile.	$15.40
b. 5 hours including travel.	
RRP @ $120.00/hour.	$600.00
KAP @ $85.00/hour.	$425.00
3. Search for and map underground utilities.	
6.5 hours Conduit pipe, wire survey, JM @ $55.00/hour.	$357.50
4. Review survey line and temperature monitoring station layout with Bellefonte Borough and Barton & Loguidice including site visit. 4 hours assuming need for dedicated trip. 4 hours RRP@ $120.00/hour. Travel 22 miles.	$480.00
5. Hand auger representative sites to 3-ft. depths, collect, label and retain samples in sandwich bags.	

Cost and Delivery Time

6. Confirm 3-ft. deep monitoring holes did or did not penetrate the water table. Set 3.3-ft. PVC pipes, but delay backfilling annular auger hole spaces until the 3-ft. target depth is confirmed. RRP, KAP, JM and Bellefonte Borough staff.

7. Concurrently, hammer drill holes along all survey lines, set pipes, and backfill annular spaces for all monitoring stations. Bellefonte Borough staff.

Efforts noted in 4. 5. and 6 include:

Travel to work site 2 round trips (44 miles and 1 1/2 hours)	
18 hours RRP @ $120.00/hour.	$2,160.00
18 hours KAP @ $85.00/hour.	$1,530.00
18 hours JM @ $55.00/hour.	$990.00
Travel 44 miles @ $0.70/mile.	$30.80

8. Log auger samples for texture, stone contents, Munsell color, etc.

4 to 6 hours RRP @ $120.00/hour.	$480.00 to $720.00*
4 to 6 hours KAP @ $85.00/hour.	$340.00 to $510.00*

9. Prepare graphic logs and cross-sections for each geothermal survey line together with a temperature and utilities map and data table.

2 hours RRP @ $120.00/hour.	$240.00
6 hours KAP @ $85.00/hour.	$510.00
6 hours JH @ $60.00/hour.	$360.00

10. Prepare Report, interpretation of data, conclusions and recommendations.

5 hours RRP @ $120.00/hour.	$680.00
7 hours KAP @ $80.00/hour.	$560.00
6 hours, computer graphics, JH @ $60.00/hour.	$360.00
6.5 hours Word processing and office management, EBP @ $55.00/hour.	$357.50

11. Discussion and review of findings and recommendations with Bellefonte Borough and Barton& Loguidice. Confirm or modify proposed monitoring and water supply test well sites.

Option A To repeat and confirm geothermal measurements and interpretations resulting from first survey within 8 to 10 days. Cost based on hours and expenses required to complete and analyze first round of measurements.	Cost based on time required for the first temperature survey

	Cost and Delivery Time
Option B Add additional lines to further define the extent and magnitude of thermal anomalies.	Cost To Be Determined

Option C Terminate the geothermal prospecting investigation.

Travel 22 miles @ $0.70/ mile.	$15.40
Subtotal A Supplies and Equipment	$1,388.75
Subtotal B Office and Field Work and Travel	$7,231.20 to $7,397.20*
Total	$10,002.45 to $10,242.45*

TASK C VLF SURVEY

A. PURCHASE/RENTAL

1. Ronka EM16 Electromagnetic Survey Meter.	$100.00
2. Flagging pins acquired for TASK B.	____

B. FIELD AND OFFICE

1. Layout and flag Ronka EM16 survey lines parallel to and at right angles to Logan Branch Lineament and stratigraphic strike and steeply dipping carbonate rock within expanded area southwest, west and northwest of Big Spring.	
5.0 hours RRP @ $120.00/hour.	$600.00
5.0 hours JM @ $55.00/hour.	$275.00
Travel 22 miles @ $0.70/mile RRP.	$15.40
2. Expand buried utility search for conductors to the west and northwest of Big Spring using lines laid out in (1). Flag suspected utilities.	
7 hours JM @ $55.00/hour, field work.	$385.00*
Travel 22miles @ $0.70/ mile, JM.	$15.40*
JM or Bellefonte Borough*	
3. If Bellefonte Borough has a map that shows utilities in this area, add the planned VFL traverse lines to this map in advance of Ronka field survey.	
2.5 hours JM @ $55.00/hour.	$137.50
2.5 hours KAP @ $80.00/hour.	$212.50
4. Conduct VLF survey, flag electrically conductive anomalies.	
8 hours RRP including travel @ $120.00/hour.	$960.00
8 hours KAP @ $85.00/hour. Record Ronka EM16 in phase and out of phase reading for each station. Keep track of survey line, station number and heading.	$680.00

Cost and Delivery Time

5. Prepare cross-sections showing stations and in phase and out of phase readings taken at each station including known or suspected conductive utilities.

6 hours KAP @ $85.00/hour.	$510.00
6 hours JH @ $60.00/hour.	$360.00

6. Prepare Analysis Report Findings, Conclusions, edits.

7.5 hours RRP @ $120.00/hour.	$900.00
6 hours Word processing and office management, EBP @ $55.00/hour.	$330.00

7. Review VLF Investigation Results Together With Findings From TASKS A and B with Bellefonte Borough and Barton Loguidice. Confirm locations recommended for potential Supply and Monitoring Wells or offer Alternate Sites.

2 hours RRP @ $120.00/hour.	$240.00
Travel 22 miles @ $0.70/mile RRP.	$15.40
Subtotal Expenses	$146.20
Subtotal Professional Services	$5.589.50
Estimate Total	$5,735.70

Bellefonte Borough Authority Meeting March 4th 2025 WWTP Report

Bulk Water sales for the month of January were approx. 22,000 gals.

2/4/25 – Maint. replaced a ballast on each UV bank & 2 lamps. – Received 32 airlifts from Nexom for sand filter replacement.

2/6/25 – Sand filter pump tripped out every day this week and touch screen went blank (OOS). – Jean called for discussion on IU permits and changes, revised copies pending.

2/7/25 – Requested and received Ralph's OK to move forward with Control bldg.. source chiller replacement.

2/11/25 – Contacted USALCO of their being awarded the Alum bid.

2/13/25 – Received amended IU permits from Jean. – SS submitted qtrly. press sampling.

2/18/25 – Jean & Paola from B&L at the plant along with our new DEP biosolids inspector. Introduction and discussion on Annual Biosolids Report. He requested an updated Enhancement plan and Sampling plan both be done and forwarded to him. Paola scanning and sending our hard copy binder electronically for our Biosolids report. (submitted report 2/20/25)

2/19/25 – Conducted 4 operator interviews over two days. First person offered the job declined. – Received my to-do list from Jean for the Pretreatment & Chapter 94 reports.

2/20/25 – Influent sampler in need of parts for an overhaul. Mack triaxle scheduled for tarp cover replacement 2/24.

2/25/25 – Zoom meeting w/ Martz, Jean, Julie and staff on carrier fluid and R.A.S. pump bucket placement and wiring/fiber. – Suburban lab on site to assess PFAS sampling locations & provide guidance on collection. Sampling later after some questions get answered.
– Received the finalized NPDES permit adding Total Aluminum, Copper and Silver sampling 1/week, E. Coli 1/month and quarterly PFAS sampling w/quantitation limits on four line items.
– SS sampled and sent out the quarterly fecal coliform sampling from the storage bldgs.. Maintenance repaired the high conveyor which came out of the track. Down to 3 airlifts to install of the 32 ordered.

Water Report March 2025

2/3/25 Repair 4" water main @ 623 E. Bishop St (clamp)

2/4/25 Repair 4" water main @ 641 E. Bishop St (clamp and install new tap)

2/5/25 Look for potential leak @ 475 Blanchard St (no leak found)

2/6/25 Leak detection, locate leaking @ 121 E. Curtin St (hose bib on)

2/7/25 Leak detection, 2 water meter appointments

2/10/25 Leak Detection, Sewer back up @ 623 E. Beaver St (customers side)

2/11/25 Flagger Training, final inspections @ lot 53 & 144 Logan Greene

2/13/25 Sewer Dye Test, 4 water meter appointments

2/17/25 Leak detection Coleville area, camera sewer @ 735 W. Lamb St

2/18/25 Sewer issue @ 343 E. Lamb St (found shared lateral with 337,335 E. Lamb St that runs to E. Linn St)

2/19-20/25 Leak detection

2/20/25 Leak reported @ Summit Park (8" water main break)

2/20-28/25 JVH new water main & service line install @ Logan Green Phase 2A

2/24/25 Repair leak @ 735 W. Lamb St (15 ft ¾" CTS)

2/24/25 Call out to Shut water off @ 131 St. Paul St (frozen, broke pipes in house)

2/25/25 Repair 6" water main @ 219 N. Penn St (clamp)

2/26/25 Leak Detection (Bishop St/McCallister St), Fix soffit/ Facia @ Reservoir

2/28/25 Clean sewer main on Airport Rd, Charge new water main @ Logan Greene 2A, 1-call Airport Rd for complex project

Installed 29 water meters. (27) replacements, (2) new construction

Marked 32 PA-1 calls

Niagara Filling Station 241,000 gallons

Bellefonte Borough Authority
Corning Water System
Updated Tapping Fee Calculations

March 28, 2014

Introduction / Summary

As requested by the Authority, Nittany Engineering & Associates, LLC has reviewed and updated the previous tapping fee calculations completed for that part of the Authority's water system known as the Corning System.

The updated calculations are based on the information provided in the document titled "Borough of Bellefonte Authority, Compliance with Act 57 Review, Corning Water System", dated April 2, 2004, as prepared by Herbert, Rowland & Grubic, Inc.. A copy of this document is attached for reference.

The updated calculations indicate that the tapping fee of $2.53 per gallon can be increased to $**3.53** per gallon. The updated calculations are attached and referenced as Exhibit 1 and Exhibit 2.

Per the Act 57, 65 gallons per day per capita is to be used in determining a typical single family household water usage. This would equate to a tapping fee of $580.04 for a single family household. The Authority may also use past water consumption records in establishing the tapping fee for a single family household.

Based on the 2013 Borough of Bellefonte Fee Schedule, the current tapping fee is $607.20. This tapping fee is based on a $2.53 per gallon tapping fee and 240 gallon water usage per equivalent dwelling unit (EDU). This may need to be revised to $580.04 (or less) unless past water usage confirms that 240 gallons per EDU is accurate.

Conclusion

The current tapping fee can be increased to a maximum of $3.53 per gallon.

The Authority should verify what value of daily water usage they will use to calculate the tapping fee for a single residential dwelling. Please note that the daily water usage used in the updated calculations (Exhibit 2) is based on 65 gallons per day per capita and the 2010 Census Data for Centre County.

BELLEFONTE BOROUGH AUTHORITY
Corning Water System
Act 57 Tapping Fee Calculation
Exhibit 1

Trended Capital Costs

Description	Total Project Cost	Grants & Contributions	Net Project Cost	ENR Index Year Completed	ENR Index Avg Index Mar-14	Trend Factor	Net Trended Cost
	A	B	C=A-B	D	E	F=E/D	G=C*F
*1966 Original Facilities	$ 725,000.00	$ -	$ 725,000.00	1019	9702	9.5	$ 6,902,768.40
*1996 addtions	$ 32,890.00	$ -	$ 32,890.00	5620	9702	1.7	$ 56,778.91
*2000 additions	$ 34,724.75		$ 34,724.75	6221	9702	1.6	$ 54,154.98
*2002 additions	$ 15,015.00		$ 15,015.00	6538	9702	1.5	$ 22,281.27
*2003 additions	$ 12,675.63		$ 12,675.63	6694	9702	1.4	$ 18,371.45
Total Capacity Trended Cost	$ 820,305.38	$ -	$ 820,305.38				$ 7,054,355.00

BELLEFONTE BOROUGH AUTHORITY
Corning Water System
Act 57 Tapping Fee Calculation
Exhibit 2

Approach #1 - Use Historical Cost, Trended to Current Cost
Tapping Fee Calculations Per 65 gpcd Method

A	Total Net Trended Capital Cost	Exhibit #2	$	7,054,355.00
B	Outstanding Debt	Exhibit #1	$	-
C	Adjusted Capital Cost	C=A-B	$	7,054,355.00
D	System Design Capacity (gpd)	D		2,000,000
E	Unit Cost	E=C/D	**$**	**3.53**
F	Household Flow	F		164.45
G	Maximum Tapping Fee For a single family residence	G=ExF	$	580.04
	Max. Tapping Fee Cap. & Col. For a single family residence		$	580.04

Household flow = 65 gpcd x 2.53 residents/household*

Household flow = 164 gpd/household

* 2010 US Census Data

Notes:
1. It appears that the tapping fee for the Corning System could be increased from $2.54 per gallon to $3.53 per gallon.
2. These calculations are based on the assumption that there is no outstanding debt service on the Corning System and the calculations do not include any planned projects that may be eligible for inclusion in the tapping fee calculations.

Approach #2, Historic Cost plus interest and other financial fees paid on Debt
NOT USED

Approach #3, Historic Cost times Weighted Average Interest Rate (WAIR) on Debt
(Original Act 203 Tapping Fees times WAIR = New Act 57 Tapping Fees)
NOT USED

Ralph Stewart

From: douglasd398@aol.com
Sent: Monday, February 3, 2025 3:58 PM
To: Ralph Stewart
Subject: Fw: Repair of stonework at talleyrand park

Sent from AOL on Android

----- Forwarded Message -----
From: "douglasd398@aol.com" <douglasd398@aol.com>
To: "rstewart@pa.gov" <rstewart@pa.gov>
Sent: Mon, Feb 3, 2025 at 11:09 AM
Subject: Repair of stonework at talleyrand park

Doug Decker Masonry Inc
1178 Clarence road
Clarence pa 16829

Scope of work involved.
Small section of wall rebuild $500.
Repoint top and sides where needed. $800
Repoint approximately 80sq.' Of wall cap and sides where needed. $1500
Repiont approximately 120sq.' Of cap and wall where needed. $ 1200.
Repoint 150sq.' Of wall. Cap and sides where needed. $1000.
Repair little peice of wall by new wall. $750.
Repair top cap of wall on street side $900.
Repair 2 caps$450
Repair wall facing street 120sq' $1200
Repair corner of wall at corner of high and water streets. $650
Repair wall by fountain $700.
Repair section of wall facing street approximately 165sq.' $1200
Repair of one peir $400
Rebuild one section in rear of beaded wall. $1200.
Repoint any areas in need front rear and top of beaded wall $2000.

One third down upon commitment

One third down when 2/3 is completed.

Remainder due in full upon completion

Thank you

Doug Decker
Sent from AOL on Android

HISTORIC
Bellefonte™
Est. 1795

February 7, 2025

Michael B. Danneker, Manager
Spring Township
1309 Blanchard Street
Bellefonte, PA 16823

Re: Letter of January 23rd Regarding New Water Wells in our Area

Dear Mike,

I am replying to your above-referenced letter on behalf of the Bellefonte Borough Authority. I know a similar letter is going to Borough Council. The Authority is overseeing the exploratory project you are inquiring about. The Authority is interested in improving the appearance of the Big Spring and has been since its covering in the late 1990s. Many options have been explored. It has been difficult to find an option that meets all of the EPA/PA DEP drinking water regulations and has an affordable cost. The building-over-the-spring concept was looked at and had an estimated cost of approximately $10 million dollars.

Please know that the Authority is very early in its investigatory phase. No definitive decision has been made or could be made at this point in time. We will be working closely with our engineers, consultants and PA DEP to determine if the wells concept is feasible and affordable.

Thank you and take care,

Ralph W. Stewart, Manager
Bellefonte Borough

Bellefonte Borough Administration
301 N. Spring Street, Suite 200
Bellefonte, PA 16823

Tel: 814-355-1501
Fax: 814-353-2315
www.bellefonte.net

TDD/TDY & Voice 711
TTY/TDD Only 717-237-2261
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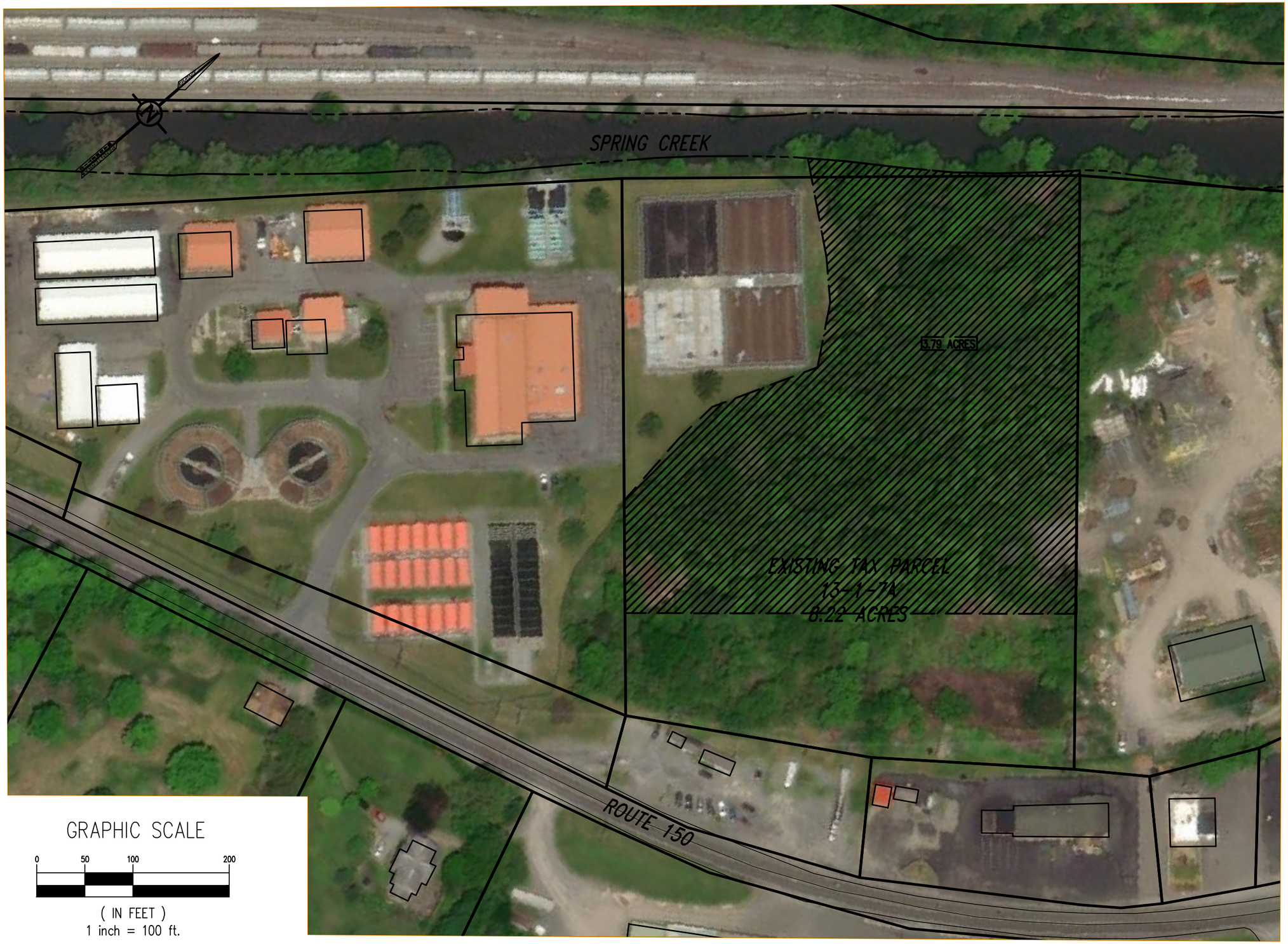
DAILY WATER WITHDRAWAL/INSTREAM FLOW REQUIREMENT REPORT			
BELLEFONTE BOROUGH		**CENTRE**	**23A**
NAME-PUBLIC WATER SUPPLY AGENCY		COUNTY	WA Permit No.
(814) 355-1501			**313588**
TELEPHONE NO.			SF Permit ID
	Report for MONTH:	February	Matt Auman
	Year:	2025	REPORT PREPARER NAME
Source ID	**7939**		**Total**
Name / Day	**Borough System Big Spring**	**Corning System Big Spring**	
1	2,634,496	896,512	3,531,008
2	2,689,792	883,456	3,573,248
3	2,688,512	920,832	3,609,344
4	2,668,288	893,824	3,562,112
5	2,617,344	924,544	3,541,888
6	2,602,240	913,280	3,515,520
7	2,575,872	918,528	3,494,400
8	2,618,112	908,288	3,526,400
9	2,595,584	901,504	3,497,088
10	2,576,128	920,576	3,496,704
11	2,643,712	937,600	3,581,312
12	2,625,280	966,272	3,591,552
13	2,613,760	988,160	3,601,920
14	2,603,264	982,272	3,585,536
15	2,620,672	988,160	3,608,832
16	2,604,544	971,776	3,576,320
17	2,610,432	949,632	3,560,064
18	2,638,080	977,408	3,615,488
19	2,722,560	1,007,616	3,730,176
20	2,715,904	1,032,448	3,748,352
21	2,717,696	1,067,008	3,784,704
22	2,692,352	1,000,576	3,692,928
23	2,787,072	983,680	3,770,752
24	2,767,360	977,792	3,745,152
25	2,785,792	998,784	3,784,576
26	2,696,192	1,013,760	3,709,952
27	2,697,472	1,002,752	3,700,224
28	2,685,440	1,009,280	3,694,720
29			-
30			-
31			
TOTAL	**74,493,952**		**101,430,272**
AVERAGE	**2,660,498**	**962,011**	**3,381,009**
MAXIMUM	**2,787,072**	**1,067,008**	**3,784,704**
MINIMUM	**2,575,872**	**883,456**	**-**



GRAPHIC SCALE

0 50 100 200

(IN FEET)
1 inch = 100 ft.

PennTerra
ENGINEERING INC.

CENTRAL PENNSYLVANIA
REGION OFFICE:
3075 ENTERPRISE DRIVE
SUITE 100
STATE COLLEGE, PA 16801
PH: 814-231-8285
Fax: 814-237-2308

WWW.PENNTERRA.COM

Designer	RRK/ACT
Proj.Manager	NLG
Surveyor	XXX
Perimeter Ck.	XXX
Book XXX Pg	XXX
Acad	XXX
View\Snap	XXX

BELLEFONTE WATERFRONT

BELLEFONTE BOROUGH
CENTRE COUNTY
PENNSYLVANIA

RIPARIAN BUFFER EXHIBIT (BELLEFONTE WASTEWATER TREATEMENT PLANT)

Date
FEBRUARY 19, 2025

Scale
1" = 100'

Project No.
16287

Sheet No.
1 of 1

Ralph Stewart

From: Eaton, Jon Eric <jee2@psu.edu>
Sent: Saturday, February 8, 2025 10:14 AM
To: Ralph Stewart
Subject: Re: Authority Packet for THURSDAY, February 6th, 2025

Ralph,

Thanks for sending out the tap-on fee memo. One thing I would like to suggest is having B&L use a publicly accessible construction cost index. The ENR index is fine, but you have to be a subscriber to get current values. The US Army Corp of Engineers maintains this index

https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll9/id/3016

which is available to the public. With this or similar info, we can do the rate change study without paying a consulting engineer

In any case, it has to be a construction cost index, which runs higher than inflation.

Sincerely,

Jon Eaton

From: Ralph Stewart <rstewart@bellefontepa.gov>
Sent: Friday, February 7, 2025 1:19 PM
To: Alyssa Doherty <adoherty@bellefontepa.gov>; Joe Beigle <jbeigle1420@icloud.com>; Christopher Roelke <croelke@bartonandloguidice.com>; D_delotto@comcast.net <D_delotto@comcast.net>; Doug Johnson <djohnson@bellefontepa.gov>; Frank Halderman <fhalderman@comcast.net>; Frank Noll <fnoll@bellefontepa.gov>; Greg Brown <gbrown@pinehurstcustomhomes.net>; Jean Ryan <jryan@bartonandloguidice.com>; Joe Beigle <jbeigle1420@gmail.com>; Joe Falcone <jfalcone@prwa.com>; Eaton, Jon Eric <jee2@psu.edu>; Julie Brooks <jbrooks@bellefontepa.gov>; Matt Auman <mauman@bellefontepa.gov>; Shannon Struble <sstruble@bellefontepa.gov>
Subject: RE: Authority Packet for THURSDAY, February 6th, 2025

Hello All,

Matt located his copy of the Corning Line Act 57 tap fee study. I have attached it. Please review it. We can plan to discuss it at the next regular meeting.

Thanks,
Ralph

__
Ralph W. Stewart, Borough Manager
Borough of Bellefonte
301 North Spring Street STE 200
Bellefonte PA 16823
Phone: 814-355-1501 x214

From: Ralph Stewart
Sent: Friday, February 7, 2025 10:23 AM
To: Alyssa Doherty <adoherty@bellefontepa.gov>; Joe Beigle <jbeigle1420@icloud.com>; Christopher Roelke <croelke@bartonandloguidice.com>; D_delotto@comcast.net; Doug Johnson <djohnson@bellefontepa.gov>; Frank Halderman <fhalderman@comcast.net>; Frank Noll <fnoll@bellefontepa.gov>; Greg Brown <gbrown@pinehurstcustomhomes.net>; Jean Ryan <jryan@bartonandloguidice.com>; Joe Beigle <jbeigle1420@gmail.com>; Joe Falcone <jfalcone@prwa.com>; Jon Eaton <jee2@psu.edu>; Julie Brooks <jbrooks@bellefontepa.gov>; Matt Auman <mauman@bellefontepa.gov>; Shannon Struble <sstruble@bellefontepa.gov>
Subject: RE: Authority Packet for THURSDAY, February 6th, 2025

Hello All,

I have attached Dr. Parizek's proposal. It came in last night during our meeting. Please look it over. Unless I missed it, I ididn't see a cost for the work. When I talked to Dr. Parizek on the phone prior to our meeting, he indicated that he would like to go over the proposal with you. I will email him back to see about a cost for the work. We could consider another work session or special meeting.

Thanks,
Ralph

__
Ralph W. Stewart, Borough Manager
Borough of Bellefonte
301 North Spring Street STE 200
Bellefonte PA 16823
Phone: 814-355-1501 x214

From: Alyssa Doherty <adoherty@bellefontepa.gov>
Sent: Tuesday, February 4, 2025 9:31 AM
To: Joe Beigle <jbeigle1420@icloud.com>; Christopher Roelke <croelke@bartonandloguidice.com>; D_delotto@comcast.net; Doug Johnson <djohnson@bellefontepa.gov>; Frank Halderman <fhalderman@comcast.net>; Frank Noll <fnoll@bellefontepa.gov>; Greg Brown <gbrown@pinehurstcustomhomes.net>; Jean Ryan <jryan@bartonandloguidice.com>; Joe Beigle <jbeigle1420@gmail.com>; Joe Falcone <jfalcone@prwa.com>; Jon Eaton <jee2@psu.edu>; Julie Brooks <jbrooks@bellefontepa.gov>; Matt Auman <mauman@bellefontepa.gov>; Ralph Stewart <rstewart@bellefontepa.gov>; Shannon Struble <sstruble@bellefontepa.gov>
Subject: Authority Packet for THURSDAY, February 6th, 2025

Good Morning Authority,

The upcoming Authority meeting will be held on **Thursday, February 6th, 2025 at 6:00 pm** in the Oak Room (Small Conference Room), 301 N. Spring Street. 1st Floor. The meeting will be held in person. Attached is the Authority packet for your review. There will be a printed packet at the table for everyone.

I've included below a Zoom link for those who need to attend virtually. Please let me know if you will attend virtually no later than 3:00 pm, Thursday February 6th, 2025.

Topic: Bellefonte Borough's Authority Meeting

Time: Feb 6, 2025 06:00 PM Eastern Time (US and Canada)
Join Zoom Meeting
https://us02web.zoom.us/j/82603443037
Meeting ID: 826 0344 3037

Thank you,

Alyssa A. Doherty
Assistant to the Borough Manager

Borough of Bellefonte
301 N. Spring St, Ste. 200
Bellefonte, PA 16823
Office: (814) 355-1501 Ext. 217
Fax: (814) 353-2315
Website: https://bellefonte.net/