

**BOSTON GROUNDWATER TRUST (BGwT)**  
**BOARD MEETING**  
**November 17<sup>th</sup>, 2022**

The Board of Trustees of the Boston Groundwater Trust met in the Jeffrey Saunders Executive Suite at the Lenox Hotel located at 710 Boylston Street, Boston, MA. The Executive Director electronically distributed the meeting notice and agenda to the City Clerk at Boston City Hall in accordance with the provisions of the Commonwealth of Massachusetts' Open Meeting Law.

Mr. Robert Whitney, co-chair, read the following statement:

"I, Robert Whitney, co-chair of the Boston Groundwater Trust, am calling this meeting to order at 4:06 pm. In accordance with the Commonwealth of Massachusetts Executive Order Suspending Certain Provisions of the Open Meeting Law, we are conducting this meeting on-line. To ensure public access to the deliberations of the BOSTON GROUNDWATER TRUST, the public may access this meeting through telephone and video conferencing. Members of the public will have an opportunity to ask questions and provide public comment. To do so please, "raise your hand" in the application via the Zoom meeting platform. If you are calling in and cannot use the platform, you can send your questions to staff via email at [csimonelli@bgwt.org](mailto:csimonelli@bgwt.org) or via Twitter by tagging the Twitter handle @BOSTONGWT and using the hashtag #NOV22MTG."

The following trustees were present at the Lenox Hotel:

Mr. Gary Saunders, Back Bay Association  
Mr. Robert Whitney, Beacon Hill Civic Association  
Mr. Peter Shilland, Ellis Neighborhood Association  
Ms. Angie Liou, Asian Community Development Corporation  
Mr. Tim Mitchell, Neighborhood Association of the Back Bay

The following trustee was present virtually:

Ms. Janine Commerford, Greater Boston Real Estate Board

Also present at the Lenox Hotel were:

Mr. Christian Simonelli, Executive Director; Mr. Justin Comeau and Mr. Daniel McCormack, BluCloud Inc.

Also present virtually was:

Ms. Beatrice Nessen, Boston Preservation Alliance

**1. BluCloud Inc. Remote Well Reading Device Update**

Mr. Simonelli introduced Mr. Justin Comeau and Mr. Daniel McCormack of Blu-Cloud Inc. Mr. McCormack provided an update on a remote monitoring solution for the Trust's observation wells. He covered the following points during his presentation to the Board:

- A project timeline from 2017 conception to present day status of 5 units deployed in 5 observation wells throughout the city.
- Example of an existing unit deployed.
- A review of the unit technology, warranty, and potential pricing.
- Refer to a copy of the attached presentation for additional information.

Mr. Comeau and Mr. McCormack took questions during and following the presentation. Discussion followed.

**2. Adoption of September 15<sup>th</sup>, 2022, Board Meeting Minutes**

Meeting minutes were previously emailed to Board members for review. Discussion followed.

Mr. Whitney moved to adopt the minutes. Mr. Mitchell, Trustee, seconded the motion.

**Voted:** To accept the Board meeting minutes.

**3. Financial Report**

Mr. Whitney and Mr. Simonelli reviewed the Trust's financials. Discussion followed.

**4. 2022 SEP-IRA Contribution**

Mr. Simonelli reviewed the Trust's annual contribution to the employee SEP-IRA account. He noted that the FY22 budgeted amount was \$4,300. Based on the 2021 W-2 income, a 5% contribution would require \$4,380. Discussion followed.

Mr. Whitney moved to adopt the 5% contribution. Mr. Saunders, co-chair, seconded the motion.

**Voted:** To approve the annual 5% contribution to the Trust employee's SEP-IRA.

5. **2023 Trustee Meeting Dates**

Mr. Simonelli reviewed the proposed meeting dates for the 2023 Board meetings. Mr. Simonelli stated that per the organization declaration of trust the Trustees may schedule meetings as deemed necessary, but the Board is only required to meet four (4) times each year. Discussion followed.

The Board decided to maintain the proposed January 19<sup>th</sup>, 2023, meeting date and revisit the proposed 2023 meeting dates as needed. Discussion followed.

6. **2022 City-Wide Groundwater Forum Discussion**

Mr. Simonelli and the Trustees reviewed the Groundwater forum held at the central branch of the Boston Public Library on Tuesday September 20<sup>th</sup> from 5pm-7pm. Mr. Simonelli reviewed the number of attendees, website traffic metrics, and feedback received. Discussion followed. Refer to the attached in this packet for additional details.

7. **Website Information Center Review**

Mr. Simonelli reviewed the observation well and building foundation information center on the Trust website. Discussion followed. Based on the comments provided by the Board members and public, Mr. Simonelli will modify the information center and publish the new version on the website. Discussion followed.

8. **Ordinance for Legal Representation Update**

Mr. Simonelli reviewed his discussion with John Houton, Jr. Assistant Corporation Counsel, City of Boston Treasury Department, regarding the approved City Council Ordinance for legal representation. Mr. Houton stated that the approved ordinance is the document the Trust and its employees should reference if any legal issues arise in which the law department is required per the approved ordinance to represent the Trust and/or its employees. Discussion followed.

The Board advised Mr. Simonelli to send a memo to all Trustees summarizing the above the conversation for their records. In addition, a copy of the Ordinance and the disposition of the Ordinance is posted on the BGwT website under the organization page.

9. **Executive Director's Report**

BGwT Executive Director Mr. Christian Simonelli distributed his report. Discussion followed. Refer to the attached *Executive Director's Report November 17th, 2022*, for a complete list of activities. Discussion followed.


**Mr. Saunders, co-chair, moved to adjourn the meeting. Mr. Whitney seconded the motion.**

**The meeting adjourned at 5:31p.m.**

**NEXT MEETING: January 19<sup>th</sup>, 2022 @ 4:00 pm, at the Lenox Hotel with a virtual attendance option.**

Notes submitted by Christian Simonelli, BGwT Executive Director, 11/18/2022.

Approved 11 January 2023

A handwritten signature in blue ink, appearing to read "J Commerford", with a large, stylized flourish extending to the right.

J Commerford, Secretary

**BluCloud**  
 Remote Sensing Made Simple  
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Our Clients



**AECOM**

And More...

The Stack unit delivers pH data, to locate problems, and track along with the pH



Turnkey Remote Monitoring Solutions

REASONS TO USE STACK	THE STACK OPERATIONS
<ul style="list-style-type: none"> <li>• Inventory Monitoring from any internet accessible location in the world</li> <li>• Delivery Scheduling</li> <li>• Remote Control</li> <li>• Operational Optimization</li> <li>• Increased Safety by keeping employees off of the landfill</li> <li>• EPA Compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring Capacity: Up to 99 units</li> <li>• Power Source: Lithium Battery, AC, Solar</li> <li>• Read Rate: 1 to 24 samples per day</li> <li>• Stack Reporting: As needed</li> <li>• Weight: 3 lbs</li> <li>• Communication Method: Solar Cellular/GSM, CDMA, Satellite, &amp; Landline via B-Channel</li> </ul>
<p><b>APPLICATIONS</b></p> <ul style="list-style-type: none"> <li>• Tank Farms in Remote Locations</li> <li>• Shipyards, Ports, Corporates &amp; Chemical</li> <li>• Tidal Heights &amp; Sea Level</li> </ul>	<p><b>COMMUNICABLE METHOD:</b>            Solar Cellular/GSM, CDMA, Satellite, &amp; Landline via B-Channel</p> <p><small>Applications subject to change without notice</small></p>
<p><b>STACK INSTALLATION OPTIONS</b></p> <ul style="list-style-type: none"> <li>• Tower</li> <li>• Road</li> <li>• Trip</li> <li>• Base</li> </ul>	

**The Stack:**  
 Wireless Multi-Tank Inventory System




The modular wireless tank gauging solution designed to meet your needs now and in the future!

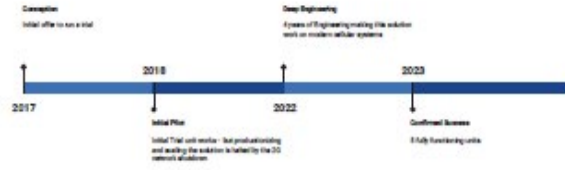
**Stack Units**

Stack Units are also available with a variety of accessories:

- Industrial Caging
- Several sizes of solar panels to power both the unit and sensors



### The BluCloud + BOWT Journey



### Product



### Product

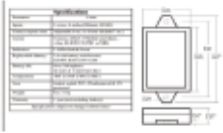
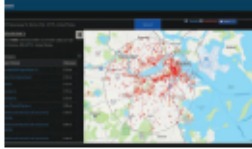


### Product



## Technology

- Partners have been producing depth monitoring equipment for over 40 years
- 4G/LTE Cat M1 cellular technology
- Cellular Service will be provided by 1 of 4 different providers



## Warranty

14 months from the date of delivery to Boston GroundWater Trust

## Our Pricing

Name	Description	Warranty	Replacement Cost	Initial Price
Monitor - M1	depth monitoring device using 4G/LTE Cat M1 cellular technology	14 Months	See Right	\$2,500
Monitor - M2	depth monitoring device using 4G/LTE Cat M1 cellular technology	14 Months	See Right	\$2,000
Monthly Service	includes cellular service subscription and access to the portal	N/A	N/A	\$20/mo/Monitor
Sensor	depth monitoring sensor accurate to 2 inch - can be installed	14 Months	<= 20% of unit cost	\$0
Battery	all sensors include 3x battery pack with 3-month warranty	14 Months	<= 30% of unit cost	\$0

\*Additional Savings with Larger Order Volumes

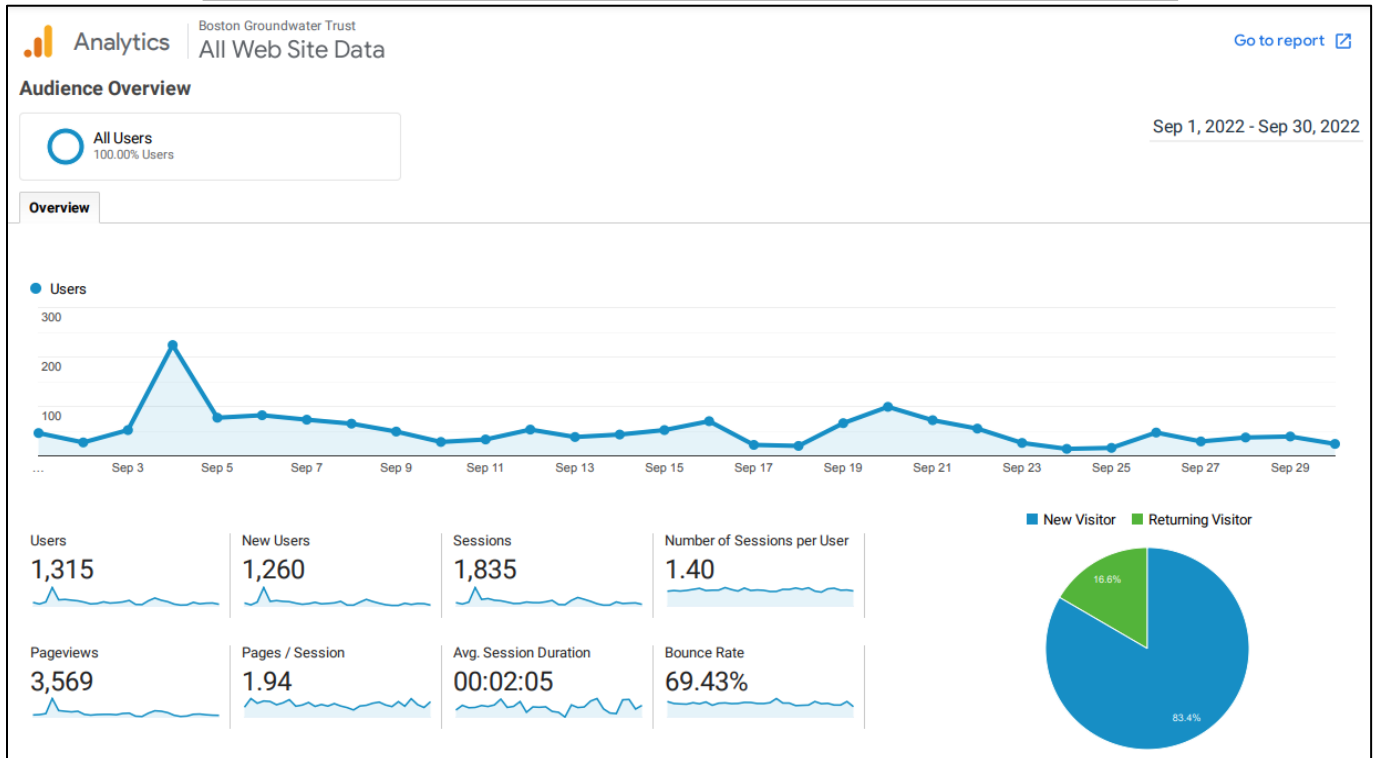
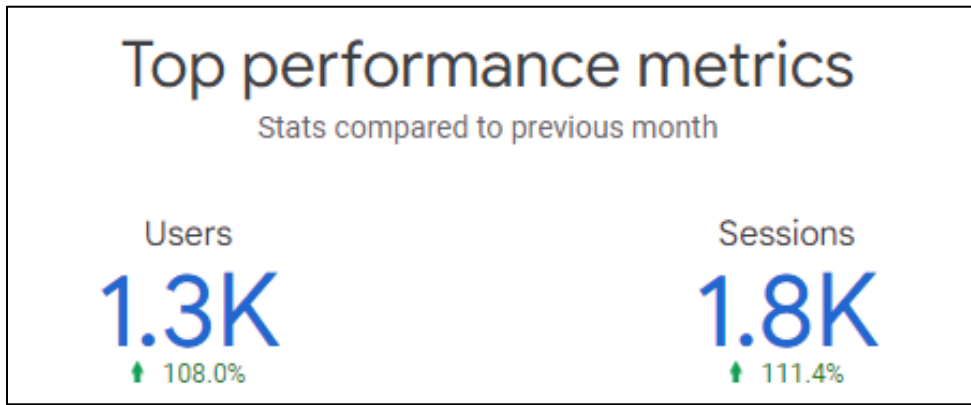
 **BluCloud**  
Remote Sensing Made Simple  
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# 2022 Groundwater Forum

## By the numbers....

- Registered through Eventbrite: 198
- Approximate attended in person: 100
- Signed up virtually via Zoom: 79
- Attended via Zoom: 47
- Questions in the chat: 6
- Signed up for newsletter: 39

## Website metrics....





**Written feedback received:**

- Yesterday's event was excellent! You all did a really fine job putting it together and running it. I was really pleased and impressed. Kudos to all of you!
- Overall, it was terrific. You are an excellent speaker and Rob was an engaging facilitator.
- Unfortunate that there wasn't enough time to moderate the panel, but you gave the attendees a lot of information in this thoughtful and comprehensive forum.
- You may want to solicit feedback from the other Trustees while it is still fresh in our minds.
- Some additional editing would have been helpful. Did we really need to hear from the Amsterdam expert and 5 panelists when 3 would have been sufficient?
- Really enjoyed the remarks from Matt O'Malley (Vicinity), Kate England (Green New Deal Director) and John Sullivan (Boston Water and Sewer Commission). I felt the scientist and professor were redundant.
- I left at 7 and felt that all of the content to that point was great and useful – the electeds kept it short and sweet, and the information Christian presented was concise and useful.
- It was great to attend the event! I feel pretty similar to the others. I found the meeting really interesting – it was cool to hear from Mayor Wu about policies in Boston, I enjoyed learning the history of the pilings and felt I gained a better understanding of the problem we are facing.
- That said, I also felt that there was too much squeezed into the 2-hour window, by the time we got to the panelists I was having difficulty observing new information and would have liked to hear what the audience thoughts/the questions they had. Still, it was a very informative event.
- I learned a lot, it could have been condensed, and Q&A would have been more engaging.
- Additionally, perhaps less time on the issues/challenges and more time on proposed solutions would have been interesting.
- I thought last night was super interesting! I didn't have a lot of background knowledge on the BGT's work as well as the fragile nature of Boston's foundations, so the forum was incredibly informative! I especially enjoyed Kate England's presentation and emphasis on green infrastructure in Boston - there's certainly a lot of energy in the Wu administration for green policies, and it was really exciting to hear Kate speak about some of the work they're doing!
- I definitely agree that the event could have done with some editing and time management - they tried to fit a little too much into the 2 hours that they had and a bit of prioritizing would have been good.
- I think that they should have started the program on time especially since they knew that the library was going to close at 8:00 (and they would kick us out). And knowing that it was a fully booked 2-hour program with refreshments provided. There definitely should have been time for people to network and ask questions and not feel like, we have snacks, but they are grab and go because you need to leave immediately.
- They could have started on time, switched some of the order, and brought up Mayor Wu to speak once she arrived.
- I thought the Amsterdam expert was interesting, but he spoke too long, and I didn't understand everything that he spoke about on his slides (too many slides). The videos were well done, and I enjoyed them. I also really enjoyed the remarks from 3 of panelists were especially interesting - Matt O'Malley (Vicinity), Kate England (Green New Deal Director) and John Sullivan (Boston Water and Sewer Commission).
- Overall, I thought the program was well presented although it could have been a bit shorter. But I gained some valuable information and was glad that I had attended.
- I think it was a really well done, organized and planned event! Happy to share some comments at the next meeting!

- I thought that it ran seamlessly other than running out of time, largely stemming from the delay in starting the meeting to accommodate the Mayor's arrival. That left little time for any real panel discussion, particularly as some of the panelists gave quite extended introductions.
- I thought the Mayor's introductory remarks were excellent and set the right balance between the work of the Trust, the interplay of groundwater and climate change, and the array of other climate change-related issues facing the city.
- I felt most of the information from individual "technical" presenters was useful, if a little dense at times, and the focus on the importance of groundwater recharge - from several standpoints - was strongly reinforced. I found the discussion regarding direct groundwater level impacts from rising tides to be less relevant as there are so many variables to consider, particularly in a city.
- I thought it was an excellent set of presentations and it was good to see such a large audience. I provided a summary of the events, including links, to an online group in the South End when there was an expression of interest in what was discussed at the event by people unable to attend directly.
- I thought the event went very well. I agree that I wish we had had more time for the panel discussion, but I think that overall, the panel's remarks were well-received. Mayor Wu - as always - was excellent.
- What a terrific session it was! So well organized.
- Wonderful evening all around!
- Such a great group of presenters and presentations! So happy to have been part of this event!
- I wanted to let you know that the event was fabulous, with engaging speakers and great content. Congratulations on pulling this together!
- It was a pleasure to virtually attend the event you put on this Tuesday, and it was certainly very informative!
- Congratulations on a very exciting and well-attended event!

#### Key takeaways from comments....

- Very informative
- Learned a lot
- Super interesting
- Videos well done
- Q&A would've been nice
- Time to mingle at the end and network
- Started too late
- Not enough time for the panel
- Could've been condensed
- Tried to fit too much into 2 hours
- Panel should've been smaller panel
- Amsterdam presenter too long and too many slides
- Less time on the problems and more time on solutions

## **EXECUTIVE DIRECTOR'S REPORT**

### **November 17<sup>th</sup>, 2022**

1. **Readings** - Completed our sixth set of readings of 2022.
2. **Meetings and Calls** -
  - a. Spoke with John F. Houton, Jr., Assistant Corporation Counsel, City of Boston Treasury Department, to review the approved City Council Ordinance for legal representation. (9/20)
  - b. Attended scoping session via Zoom for the 409 Huntington Avenue project. (10/3)
  - c. Google met with Daniel McCormack and Justin Comeau of BluCloud to review performance of the 5 remote readers. (10/5)
  - d. Met with Beatrice Nessen, of the Boston Preservation Alliance to discuss serving as Trustee. (10/6)
  - e. Zoomed with Sarah Francoeur, a fifth-year Architecture and Graphic Design student at Northeastern University to discuss her senior capstone project around the promotion of groundwater recharge methods in the city. (10/6)
  - f. Zoomed with Ryan McNeil, new Project Manager at DOT, to discuss the City-State Groundwater Groups mission. (10/6)
  - g. Met with representatives from the Church of the Advent to discuss and review groundwater levels in the vicinity. (10/11)
  - h. Wrote comment letter for the Parcel 13 project. (10/12)
  - i. Wrote comment letter for the 49-63 Hudson Street (Parcel R-1) project. (10/17)
  - j. Attended Burbank Terrace project groundbreaking ceremony in the Fenway. (10/20)
  - k. Google met with Daniel McCormack and Justin Comeau of BluCloud to review performance of the 5 remote readers. (10/24)
  - l. Zoomed with Giuliana Zelada-Tumialan and members of InSAR (Interferometric Synthetic Aperture Radar). InSAR's technology is used for mapping ground deformation using radar images of the Earth's surface that are collected from orbiting satellites. We discussed its potential use on roads and wood pile supported buildings to detect settlement and their upcoming presentation at the January Trustees meeting. (10/24)
  - m. Zoomed with all members of the City-State Groundwater Working Group. (10/27) Agency updates are below.
  - n. Google met with Daniel McCormack and Justin Comeau of BluCloud to review performance of the 5 remote readers and their presentation at the November Trustees meeting. (11/4)
  - o. Testified via Zoom the Zoning Board of Appeals hearings in September, October, & November.
  - p. Communicated with residents, engineers, attorneys, & developers throughout the GCOD to discuss ZBA procedures and advised them on what they need to submit to meet the GCOD zoning.
3. **BluCloud Remote Monitoring Solution** - The 5 units have been transmitting readings daily since the beginning of March. The plan moving forward is evaluate the performance of these units over the following months and have BluCloud update the Board at the November meeting.
4. **BWSC** - An update on the following:
  - In the process of designing repairs to address the spots where groundwater infiltration has been observed in the North End, Back Bay, and the South End.
  - Lower Beacon Hill
    - Investigations continue at Brimmer and Beacon Streets. Catch basins were cleaned and no signs of infiltration were observed. Low sewer line (at approx. El. 1'-3') upstream of a regulator indicated some infiltration. Will look to get it lined.

- **Back Bay**
  - Ongoing construction to repair a deep CSO on Fairfield Street, in the Beacon-Back Street block with an estimated completion date of late Nov/Early Dec. We have installed dataloggers in the two wells closest to the repair and hope to record a positive impact on groundwater levels.
  - At Exeter and Boylston Street, 48 bottles of green dye were injected in BGwT OW at that corner over a 3-hour period on 9/22/22. No green appeared in their systems or in the Lenox Hotel. Contractor currently in the area televising, will report any findings.
  - Low area along Beacon St., Fairfield-Hereford St. blocks, contractor is currently in the area televising, will report any findings.
  - Repairs for the Blagden Street sewer and laterals are currently in design phase. Infiltration entering around a lateral of BPL, may be able to grout this location. Will add to grouting list and also televise the lines around the BPL. Also working with Vicinity Energy to check their manholes for infiltration since there are two 1.5" discharge lines tapped into BWSC sewer line. If Steam manholes are experiencing infiltration at Elev. 3' or below, this could be contributing to loss.
- **South End**
  - Investigations at a low spot along Harrison Avenue, in the East Concord Street – Worcester Square blocks, revealed groundwater infiltration in an adjacent manhole. Manhole was grouted in August 2022 but no change in GW elevation. Will continue to investigate.
- **North End**
  - No infiltration in 66" line or 84" lines under Columbus Park. Found leaky laterals along 30" sewer on Commercial St, will add to grouting list.
- 5. **MBTA** - Approximately 36. gpm is being injected into recharge wells in the South End Ellis Neighborhood area along Appleton, Berkeley, Saint Charles, Cazenove, and Clarendon Streets.
  - a. In addition to our manual monitoring, we have 4 wells in the area with dataloggers recording a water level every 60 min.
  - b. The impact of the drought is being felt on Cazenove Street where levels have dropped slightly below El. 5' BCB. The Cazenove St. recharge systems are at their maximum flow rate of 7.1 gpm. We worked with the MBTA, and their consultant to increase the flow in the Saint Charles St. recharge system from 9.0 gpm to 12.8 gpm to bring levels back up to El. 5' BCB.
- 6. **DCR** - One of the two recharge pumps for the Storrow Drive Tunnel pump station had an issue. As a result, both recharge pumps will be replaced. Typically, a 2-day process to replace the pumps. DCR will let BGwT know when the pumps are replaced.
- 7. **MWRA** – Continue to work with BWSC on sewer separation and CSO improvements in East Boston.
- 8. **DOT** – Ryan McNeil, DOT, has replaced Rick McCullough. He has met with operations & maintenance and a contractor to review the work required to line the turnpike pipe drain line.
- 9. **TIME OFF** – I'll be off November 21<sup>st</sup>-23<sup>rd</sup>, December 21<sup>st</sup> -23<sup>rd</sup> and 27<sup>th</sup>-31<sup>st</sup>.