Transformations in Boston's Waterfront, 1641 to today: Interview with Genna Kane

Harpsichord 00:00
[Intro Music]

Tegan 00:07
Welcome back to Revere House Radio. Today my guest is Genna Kane, who is a PhD student at Boston University in American Studies and is a former interpreter at the Paul Revere House, meaning her role here was talking to the public about history. Welcome to the show, Genna!

Genna 00:22
Thank you so much for having me! I'm so excited to be here.

Tegan 00:24
Can you start by telling us a little bit about yourself and your research?

Genna 00:28
Yes! My research focuses on the environmental and architectural history of Boston's waterfront since the early 19th Century. Really, my research kind of ends in the late 20th Century, but I like to say that it's very relevant to today, so it arguably comes up to the present moment as well. I'm really interested in the history of the waterfront's use, which includes things like how the waterfront was converted into property, how many different people use it for different purposes, such as parks, railroad terminals, places for industrial manufacturing, and more recently, things like the airport, hotels, other current attractions, things like that. And then, of course, I'm really interested in other challenges that face the waterfront today, especially climate change induced sea level rise. And before I entered grad school, as you mentioned, I did work as an interpreter at the Paul Revere House.

Tegan 01:19
That's great. And so as you know, the seaport and the fact that we are right by the waterfront is also a big part of Paul Revere's story. It's not necessarily the thing that visitors are thinking of when they're coming in, but Boston was very much a seaport town in Revere's time. While Revere was trained as a silversmith, his business and his life were absolutely linked with the sea, because Boston's whole economy was linked with the sea. When you worked here, did you find any crossover between your knowledge of the colonial era and the information that you're now studying for your research?

Genna 01:49
Yeah! That's a great question. So I do want to say that when I worked here, I found that the topic of the waterfront's change and growth actually came up much more than I would have thought. And that really came up when visitors saw historic maps of Boston. So wherever they saw them, they had burning questions about how the waterfront changed.

Tegan 02:06
Yeah.

Genna 02:06
It was actually a really great avenue to talk about at the Paul Revere House, because the waterfront changed so much right near North Square. So in my own research, I definitely have to build off of that, and very much talk about the colonial period. My research really starts in the early 19th Century, mostly because I'm really interested in this time when the waterfront's use moved away from those traditional maritime, shipping, and fortification purposes. But in order for me to talk about those changes, I have to talk about why Boston was founded as a seaport in the first place in the colonial period, and what that meant. And the other reason this very much comes up in my research is because there was a really important law that was established in the colonial period, and a lot of merchants would have benefited from this, and it's something that really informed the waterfronts development subsequently. This law was called the Ordinance of 1641-1647, and it basically allowed any waterfront property owner in Massachusetts -- but mostly people took advantage of this in Boston -- to build a wharf out from their waterfront property to about 1650 feet, which was the recognized length of the boundary of low tide.

Tegan 02:07
Okay.

Genna 02:53
That actually granted quite a bit of power to waterfront property owners. And it actually turned a lot of the waterfront into private space, rather than public space that everyone could navigate. So this really informed waterfront development. It allowed all of these wharfs to really pop up, especially in downtown Boston near the North End. And it definitely undergirded the growth of the waterfront and the seaport in the period that Paul Revere would have been conducting his business as well. So I really have to talk about that. I argue very much that that legacy extended into the 19th and 20th centuries as well.

Tegan 03:53
Yeah, that's fascinating, because when I picture the waterfront in Paul Revere's time -- so, he bought the house that we think of as the Paul Revere House in 1770, but he but he also grew up in the North End -- I picture waterfront that doesn't have any beach. Basically every street ends in a wharf. There's just little segments of shoreline in between each wharf.

Genna 04:13
Yes.

Tegan 04:14
But I hadn't really thought about the legal structure that meant that that was possible.

Genna 04:18
Exactly, yes! So it used to be probably closer to what we would think of as a beach today, and a lot of Boston's waterfront, too, had these spaces called "tidal flats." And a lot of them were very, like, marshy ...had salt marshes as well. So it was closer to what we would think of as a beach, where the tide would

come in and out, and this space would be dry and then wet, and then dry and then wet. But that really allowed people to build those wharfs. Because a lot of the waterfront was actually very shallow, it was very simple to construct a wooden wharf in Paul Revere's time, and then later build them with other stronger materials as the centuries went on. So that very much was defining what Boston was, how its economy functioned. People were allowed to and encouraged to make structures like that.

Tegan 05:02
Yeah, absolutely. So when we talk about Paul Revere's neighbors, there are people who are in the whaling industry. There are people who are, you know, fishing for cod and then that's being sent all over the world, involved in triangle trade. There are ship builders. There are a lot of people doing overseas trade, making sure that we're getting the cloth, and the tea, and the other things that become controversial in terms of the import taxes that we didn't have a vote in. But all of that is a big part of Paul Revere's Boston. So can you tell me what changed in the early 19th Century? What makes that a good starting point for the period you do study?

Genna 05:35
Yeah, that's such a great question! So what really started to change in the early 19th Century, especially the 1830s and 1840s, is that Boston actually started to decline relatively as a maritime port. This was the period where New York really started to skyrocket as a port, and other ports on the East Coast as well really started to grow and expand. And Boston, by this point, was considered to be relatively geographically isolated, and therefore more expensive to ship freight. So a lot of the goods that were being imported through Boston actually declined quite a bit, relatively, at least. At this point too, railroads actually started to replace a lot of the avenues for shipping freight, which meant that less traffic was coming through the waterfront itself, through Boston.

Tegan 06:21
Hmm.

Genna 06:21
The other reason that Boston really wasn't able to keep up with all these other ports is because New England as a whole didn't really have a profitable bulk export, something like cotton, or anything like that. So that meant that they were still really depending on goods to be imported. And with all those other factors that I mentioned, there was just less traffic coming through. So this really started to open the door for new types of developments. That's why I start in the early 19th Century. I'm really interested in how property owners grappled with that and tried to change that. I ultimately argue that in much of the space, especially in the 19th century, the means by which goods were imported changed quite a bit. Instead of the other traditional ships, by and large, Boston embraced railroads. There was a huge growth in building railroad terminals on the waterfront, and a lot of goods were imported through railroads instead, or exchanged at the waterfront from ships to railroads. So the port function remained. It just changed quite a bit, which changed the space of the waterfront itself. But this is also a period where waterfront property owners decided to use the waterfront to produce goods instead. There was a growth of iron foundries on the waterfront. By the late 19th and by the early 20th Century, there was a growth of things like gas light production on the waterfront. Eventually, there would be electricity produced on the waterfront. So instead of using it to store goods that were imported, or shipping them

somewhere else, or anything like that, there was this idea of using the waterfront for new production. Around this time too, we started to see the waterfront being transformed into space for parks and spaces that would accommodate different neighborhoods. Every single neighborhood in Boston in the inner harbor waterfront had a waterfront park to allow the residents to have a space to bathe and have some recreation. So I kind of argue that this really started once a lot of Boston's waterfront had to be reconceptualized with this massive change in the early 19th century, where the traditional avenues of maritime trade and exchange changed.

Tegan 08:26
Yeah, that's fascinating. And can you tell us a little bit more about those industries that are moving to the waterfront? Were they on the water just because that was a convenient location that wasn't already built up with something else that was being used? Or were they...was there an advantage physically to being on the water?

Genna 08:42
That's a great question. There were two main reasons, at least that I found. I'm sure that there are more reasons too, and it's more complicated, but this is the broad pattern. The biggest reason that a lot of these manufacturing industries went to the waterfront was because they wanted to be able to import and store coal. So I mentioned that by and large, a lot of Boston's maritime imports declined in this period. But the one exception was actually coal. Coal continued to be shipped through the waterfront, and the reason for that was New England was getting their coal from the Mid-Atlantic region, which would be Pennsylvania, Appalachia, Virginia, like those areas. And in between the Mid-Atlantic region and New England, there was actually a very confusing and clustered arrangement of railroads. And this actually made shipping coal, specifically from the Mid-Atlantic region very expensive. So a lot of these waterfront property owners realized it was less expensive for them to import coal through maritime shipping. So many of them, to kind of improve and streamline the process, decided to build these waterfront manufacturing facilities so they could just, basically, very easily store this coal and then use it for the industry.

Tegan 09:51
Got it. So then you don't have to pay for transporting the coal further after you've got it to the waterfront.

Genna 09:56
Exactly. And the other reason is that most of them were steam powered. And engineers very quickly found out that you could actually use the harbor's waterfront itself in the manufacturing process. So essentially, steam engines had to use a supply of fresh water, and they would essentially boil that in a separate boiler, and that would turn into very high pressurized steam, which would turn a turbine and then generate the power to produce whatever they were producing. But then they realized that if they intook cold sea water--from actually from any body of water, it didn't have to necessarily be sea water--but intake the sea water and then actually use that to cool down the exhaust steam, which would then basically turn that steam, which would originally just be emitted and wasted, they could turn that back into water and then use that for the boiling process. Again.

Tegan 10:47

Interesting!

Genna 10:47
So it was actually...yes, it was very efficient, and they saved a lot of money when they did this. So that was another reason why they wanted to be on a waterfront. It could have been any waterfront. Actually. If you look at a map of gas light companies, for example, in Boston, you'll see that they're all on the harbor or along the Charles River, because they wanted to be near this body of water where they could take in this water, use it to cool and then emit it. So they would pollute quite a bit, actually, because they would expel this water and it would be very warm, sometimes hot, after this process as well. So that's another reason why they were on these waterfront spaces.

Tegan 11:20
Yeah, that's interesting. And actually, when I was growing up in upstate New York, a local university was creating a project to do cooling of just buildings using our local lake. And that lake-source cooling was very controversial-

Genna 11:34
Yeah.

Tegan 11:34
-because the environmental impact of the amount that the return water had been warmed up just hadn't been studied very well.

Genna 11:42
Yeah.

Tegan 11:42
And it was one of those controversies that the questions made the newspapers, and the answers, once they were discovered, did not make the newspapers. So it's something that-

Genna 11:50
Yeah...

Tegan 11:50
-you know, I remember lake-source cooling is a big deal that I never kind of heard, well, what happened once they had enough years of data that they actually knew something?

Genna 11:58
Right.

Tegan 11:58
But it's interesting that that conversation is happening in the 90s and early 2000s in my memory, but something like that is going on that-

Genna 12:06
Yeah.

Tegan 12:07
-natural bodies of water as a cooling process is actually quite old.

Genna 12:10
Yes, it is. It is very old. It really dates to this industrial period. It kind of, like what I was saying, like, once Boston's waterfront moves -- in many spaces -- "moves on" from this, like, traditional use of just storing and importing and sending off goods, it does become this new use. And I was going to say too that, like, this is very much a contemporary question as well, because even if a company doesn't use steam engines today, they are still reliant on using bodies of water for cooling, whatever that looks like. A lot of nuclear power sites have this question too. They want to be located on waterfront so they can use the water to cool down. I was also going to mention too, that under the Clean Water Act, which was passed in 1972 heat actually was recognized as a pollutant as well.

Tegan 12:53
Mhmmm...

Genna 12:54
So even if it's not, you know, expelling waste, or it's not, like, expelling oil or something like that, it still very much has a environmental impact.

Tegan 13:03
Yeah.

Genna 13:03
In the turn of the century, where I'm studying, when this really started, they weren't thinking about it like that. They were very much thinking about it as a opportunity to use the water as a tool, as a key ingredient of the production process.

Tegan 13:16
So speaking of humans altering their landscape, I know that the shoreline in Revere's time was several blocks closer to the Revere House than it is today. And in my understanding, that I've kind of gained from other staff here, is that when the colonists had built wharves, over time, silt was gradually collecting in-between those wharves. And people eventually completed what had started semi-naturally -- natural silt in-between built wharves -- and filled in the areas that were silted up so that they could build on them. So I wanted to ask, first of all, is that understanding roughly correct based on your research, and could you tell me more about that process and when...when did it happen that that waterfront changed?

Genna 13:53
Yeah, yeah, definitely. Yeah, so as we were talking about this process of building wharves really dates to when Boston was founded as a colony. And it was actively encouraged by the government after

those ordinances of 1641 to 1647. So that's when people started to build wharves out from their property. And you have it exactly right, by this period in the 17th Century, especially, the waterfront just kind of looked like a collection of fingers, almost.

Tegan 14:19
Yeah.

Genna 14:19
Like finger wharves extending out. It would have happened that there would have been kind of an accumulation of silt and other, you know, earth and debris and things like that. But afterwards, I would actually say that it was a very intentional process to fill the space between the wharfs. This was a process called "wharfing out," and people actually did this on purpose. So they would have taken the space between the wharves and built docks or slips or other types of marinas, which involved them building more structures. So it was very much a human intervention. It wasn't as planned or methodical as building a wharf was. But the result of this was that the land between the wharves became more and more filled.

Tegan 15:00
Mhmmm.

Genna 15:00
And I do want to emphasize, too, that this was allowed. People were allowed to make land to the boundary of the low tide. So oftentimes these wharf owners would want to fill the space between other wharfs. So that was called "wharfing out." And this was the practice in the 17th and 18th Centuries. So people had been knowing how to do this for a long time. This is how Venice was built, for example! People literally built cities by filling more land, I would say, though, by the 19th Century, this process became more intentional and it extended on a much broader scale. So rather than just filling the spaces between the wharfs that already existed, people started to build specific projects. For example, the Back Bay was one of the first large scale land making projects. This started in the mid 19th century. The Back Bay was formerly a mill dam, and it was actually formerly a bay as well, which is why it's called the Back Bay.

Tegan 15:51
Right.

Genna 15:52
But then it was actually intentionally filled in through real estate developers, the state and the city, all kind of partnering together to create this new neighborhood, which was intended to be for elite residents. So this was very intentional. So the way they would have done that was they would have built, or relied upon, some kind of bordering structure. In the Back Bay, that already existed because it was a mill dam. But in other spaces, they would essentially build a sea wall as the border, and then they would deposit earth, silt, ashes, any kind of filling material at the bottom of this new, kind of, basin that they created. And then they would continue to fill this until the dirt, or the earth, replaced the water, and then they had this brand new open space.

Tegan 16:35
Right.

Genna 16:35
And then to solidify this land, they would have driven wooden piles into the new space that they created, which essentially solidified it in place. So this is how they made the Back Bay. This is also how they made South Boston, the seaport district. That was a little bit later, it started in the late 19th Century, but it was the same type of method, basically. So other areas of this occurred, included in Charlestown when they built the Mystic Pier, which is on the Mystic River. They also expanded wharves in downtown Boston near the North End with this method by the late 19th and early 20th Century as well. So it was a much more, kind of, solid way to make more land. And while in downtown Boston they weren't making land like they did in South Boston, for example, where was just like massive amounts of acres, they still were-

Tegan 17:21
Entire neighborhoods.

Genna 17:21
Exactly, entire neighborhoods. They still would have used this, this new method that I just described, which is this kind of like sea wall, filling in the land, and then driving wooden piles. And this practice continued all the way into the 20th Century, because this is also how they made Logan Airport in the 1940s and 1950s. Logan Airport's over 2000 acres big. So this has really been the way that land was made, and it differed significantly from that, like, "wharfing out" process. But the one thing that it all has in common is that it's human made, human interventions.

Tegan 17:53
Yeah, absolutely. Sometimes, when I tell visitors that, you know, a large portion of Boston is made land, they will say, does that mean it needs to be filled back in sometimes? Does it need to be repaired? And that's just something as someone who's been living in Greater Boston for almost 20 years, it hadn't occurred to me until visitors asked that they might imagine it sort of caving in on itself, and it's not caving in.

Genna 18:17
Yeah.

Tegan 18:17
And in fact, we have a whole network of tunnels for our highways that have been, you know, because of the Big Dig. But with a more informed understanding of that, could you speak to...so it's not caving in, what is going on there?

Genna 18:28
Yes, it's not so much caving in, because it was built very well. I want to emphasize that, because I get that question too, of like, "Well, is it going to collapse?" No, it's not. Cities like Boston, cities like Venice,

you know, they've been around for a long time. There's other challenges, sure, but it suddenly collapsing one day on its own probably won't happen. What is the danger, though, is fluctuating groundwater. So there's groundwater underground pretty much everywhere, in a lot of places, including Boston. And this became a problem. Especially in the Back Bay it was highlighted, I think, in the 80s. I can't remember exactly when. But essentially, what happened was some people's very valuable homes in the Back Bay, their foundation started to crumble, and they weren't sure why. So they had inspectors come in and look into it, and then they realized that the ground level under...the groundwater underneath the Back Bay just changed. It, like, declined a little bit. It decreased a little bit. And the problem with this wasn't that it caused the building to just cave randomly. It's that once the ground water decreased, basically that left those wooden piles that I described exposed to oxygen. So as long as the wood is submerged under water, it's completely fine, it's completely sturdy. But once it, uh, the level lowers, it's exposed to oxygen, and that means that the wood is susceptible to rot. So that is when the foundation started to crack. So that's really the concern. So basically, how Boston responded is they set up a whole office. It's called the Boston Groundwater Trust. They're actually really fantastic. And if you're ever curious, you can check out the data that they have published online. They have people go through and check the groundwater levels of all of the made land in Boston. And they basically just monitor it to make sure that it's at the appropriate level, to make sure that these wooden piles won't be exposed to oxygen and then rot. So if the water is high enough, then everything is fine, and if it's low enough, then they'll have to send in construction crews, or anything like that, to make sure that they can mitigate the problem before it actually starts to become damaged. But again, it's not random, it will be caused by something. But that's why we have these offices monitoring the groundwater levels.

Tegan 20:42
Yeah, that's really fascinating! And this is not a topic that I am very knowledgeable on, but I know that groundwater is also something that our Executive Director here at the Paul Revere House thinks about a lot, because I think of infiltration of groundwater into our basements. And that's something that is not urgent and is not crumbling, but is something that has to be actively monitored. And so this is something that...in historic preservation, old buildings are such a blessing and a curse. Because in most ways, old buildings are greener than new buildings, in the sense that when you are developing a new building, there's just a lot of environmental impact. But caring for an older building -- especially because a lot of old buildings in Boston are 150 years old, Paul Revere House is 345 years old -- there's just special things. And because we're entrusted to care for our collections, but also for our buildings in perpetuity. So we're hoping that the Paul Revere House will still be here 345 years from now-

Genna 21:41
Yeah.

Tegan 21:42
-and we're five blocks from the ocean, and climate change is real. So we think about groundwater infiltration. And also, problems caused by rising sea levels and more frequent serious storms is a big concern when you're right on the water in terms of climate change. So I was really interested to hear that there's an office thinking specifically about groundwater.

Genna 22:03
Yes!

Tegan 22:03
I know our director here is involved with both the Boston Green Ribbon Commission's cultural organization working group, and also the North End neighborhood has its own climate alliance. And so I feel like that's the good news with all of the things that are...feel inevitable, are not inevitable, but are...some version of them is going to happen, so we both have to do mitigation while also trying to slow the pace of climate change, because there is more that can be done. This is a little bit of a tangent from talking about that groundwater, but I also did want to ask...you study up to the very recent past. Can you tell us a bit about what's on your mind with regard to climate change in the waterfront?

Genna 22:41
Yeah, definitely. So I'm thinking a lot about, kind of, what you were saying, which is like, "What can be done?" What do we have that we can do within our control? And, kind of like, how do we....how we can we act based on the circumstances that are available to us? I mean, I think the Paul Revere House situation -- in downtown Boston, so close to the waterfront -- it definitely has to be thinking about, "Okay, how are we going to anticipate climate change?" And as far as I can see, too, these are kind of the conversations that a lot of property owners are having on the waterfront right now. Where my perspective comes in -- and I think that this is something that hasn't been talked about as much -- is how can looking at the past be a way to think about these problems? And what I hope to offer, at least with my research, is really trying to contextualize why exactly we're in this situation. So my entire dissertation really argues that the waterfront, even though it has been changed so much in so many different ways beyond that original, or, you know, "original" maritime use and fortification use, has been treated, planned, advertised, chopped up as, converted into individual property. That started with the Ordinances of 1641-1647. It perpetuated as railroad corporations took on the identity of waterfront property owners and created massive rail terminals. It continued even as city officials turned portions of the waterfront into parks, while the rest still permitted manufacturing that very much polluted all of the neighborhoods in very distinct ways. It continued even as the state built Logan Airport and prioritized transportation and travel for people coming in and out of the city, rather than the people of East Boston that lived there. Very much this idea of "property improvement," especially as, like, individual and eclectic uses very much remained, ever since the 17th Century. And I argue that that is still very much the case today. And that really becomes a problem when we think about climate change. So in addition to having this office for groundwater monitoring and regulation, the City of Boston also has a really fantastic climate resilience office. And they've done a fantastic job in the last couple of years doing meticulous research in finding out where exactly projected sea level rise is going to impact the city of Boston, and what can be done at this point to prevent all of this property from being damaged from climate-change-induced sea level rise and erosion. The problem with this, though, is that all they can do is put out these plans and say, "we really need to do this." But because the waterfront ultimately still belongs to individual property owners, and as I argue, a lot of people are still using the waterfront to build property that is going to be luxury developments, hotels, certain types of attractions -- again, infrastructure like Logan Airport that only really benefits some over others -- this is going to be a challenge. It's still in the hands of individuals, and there's still this problem of, you know, the City of

Boston can publish these plans and say "we need to work together to do this," but they're still not doing this. Even plans I've seen in the past couple of years, there have been some private developers who have embraced plans that will kind of be these, like hybrid flood walls/parks. But they're very expensive and there's no immediate reward. So a lot of the times, these plans get canceled or get swept under the rug. And instead, the waterfront is still developed with these very expensive high-rise glass towers, for example. So that is really what comes to mind for me, is that we can have all of this planning, all of this information, all of these initiatives, to say "we need to work together," and "we need to do this," and "we need to have this comprehensive plan," because the sea-level rise isn't going to care if you own this wharf and another person owns this one, right?

Tegan 23:04
Right.

Genna 24:25
But at this point, we're still very much in this mentality of, "this is my waterfront property, and I'm going to develop it this way." So that's kind of where it becomes a problem when we're faced with climate change and sea-level rise.

Tegan 25:41
Yeah, that's interesting. And it's interesting how that even seems to have antecedents in the 17th Century with "you basically own anything before the low tide mark if you have that property."

Genna 25:56
It's yours, exactly! And this idea, too. I mean, that's a very interesting change, because beforehand, even in the English tradition, it was thought that the entire water, including the high level mark, was everybody's property. It was believed that the ocean was kind of like this open highway that anyone could use it. But then Boston especially really changed this by saying, "actually, you can own this land to the boundary of low tide," especially if you make it, you improve it, you turn it into property. And I argue that that mentality, in a lot of ways, has really persisted.

Tegan 27:17
Yeah, that's really interesting. I have so many questions off of that, and I'm going to restrict myself to the ones that are more directly related to the Paul Revere House.

Genna 27:27
Yeah.

Tegan 27:27
Because I have, like, questions for you about zoning that I'm not going to ask in this podcast. But I'm interested in hearing a little bit more about the change in the waterfront in the North End during different periods of the Paul Revere House's life. So we have a little information about how some major weather events, like the 1804 New England hurricane, that was sometimes called "the Snow Hurricane," affected Paul Revere's life. It badly damaged his foundry, which was right on the water. That sort of

thing was very much on the residents' minds at the time. Are there any historical weather events that stick out for you when looking at Boston's waterfront?

Genna 28:04
Yeah! I'd say that weather events are less the focus of my research, just because I'm more interested in, kind of, the spatial developments.

Tegan 28:10
Fair.

Genna 28:10
But that said, there have been a couple interesting ones that I wanted to share, because I do think that, while they might not be the main focus in my research, I think they very much speak to this idea of the waterfront space and development has always been impacted by environmental questions. And it hasn't always been solely a human development, where they've just been able to build up the waterfront however they want. One example that comes to mind is, in my chapter where I'm talking about the changing port, I talk quite a bit about how the Cunard Shipping Line came in to East Boston in the early 19th Century. And this is an example of maritime type of trade and transportation persisting. But then, you know, this is eventually replaced by railroads, as I discussed. While I was looking into this, I found one really interesting moment in 1844 where there was so much ice in front of the East Boston Cunard wharf that laborers had to actually cut a seven mile long canal to allow the Cunard mail ships access into the East Boston waterfront.

Tegan 29:09
Wow.

Genna 29:10
Yeah.

Tegan 29:10
Seven miles??

Genna 29:11
Seven miles long, yeah. And that was actually great, because this was around the time when Boston started to actually export ice as a good.

Tegan 29:18
Oh!

Genna 29:18
So ice merchants were thrilled.

Tegan 29:19
Yeah.

Genna 29:20
But it really does show that these spaces weren't always, you know, reliably ports. They weren't always reliably able to be used in a certain way that the businessmen and developers envisioned. And sometimes they had to deal with these environmental questions. The other example I wanted to share, which comes across in my research, is there was a pretty significant series of hurricanes in the 1950s. So, it was Hurricane Carol in 1954 and I think hurricane Diane in 1955? So these two hurricanes, one after another, caused quite a bit of flooding in the Boston area, especially on the Charles River Basin. Basically, there was this dam that's built between the Boston Harbor and Charles River. It was completed in 1910. It worked really well at the time, but by the 1950s it was completely overwhelmed by all of this flooding from the hurricanes. So in reaction, the Army Corps of Engineers actually worked with local environmental groups in the Boston area. And they did eventually build a new Charles River Dam by 1978. But they also built something like 8000 acres of wetlands in the upper basin of the Charles River. So this was actually a really important investment, because wetlands are these amazing natural spaces that are, first of all, carbon sinks, so they just basically take in all of the carbon, which is great when we were thinking about emissions and pollution-

Tegan 30:43
Yeah.

Genna 30:43
-but they are also so great at absorbing flooding. So this was a really important development that came from a massive storm. And the reason I mentioned this, and I'll discuss it in my dissertation as well, it does show another solution that we can embrace to prevent the effects of climate-change induced sea-level rise? Sure we can build, you know, flood walls and barriers, but those are kind of inherently temporary, right?

Tegan 31:07
Right.

Genna 31:07
Especially as sea-level rise just continues. Because you have to keep building and building up. And cities like New Orleans show us that that doesn't really work long term. But embracing more natural spaces that...especially that have so many different types of benefits, natural ones, in addition to mitigating flooding, is a really great solution. And there's lots of groups in Boston that have pioneered these types of wetlands. There's flooding wetlands all over the place. This is a really great moment from more recent history, but it really shows how a reaction to a significant weather event really led to this really wonderful development that has been very effective so far at mitigating flooding.

Tegan 31:44
Yeah, that's great. And I've heard that wetlands are basically giant sponges in terms of water-

Genna 31:49
Yes.

Tegan 31:49
-that they just...they can soak in so much more, whereas a wall is just responding to the pressure of the water.

Genna 31:55
Yeah! Exactly. And the wall won't work forever, but the wetlands can adapt, which is what's fantastic about them.

Tegan 32:00
Yeah, that sounds fantastic. So I know I'm jumping us around in history a little bit, but in the late 1850s or 1860, Henry Wadsworth Longfellow visited the outside of the Paul Revere House before it was a museum. It was kind of a tenement building at the time. It was a boarding house. You mentioned what was going on in the 1850s and 60s with the Back Bay project.

Genna 32:17
Yes, definitely!

Tegan 32:17
Can you tell us a little bit around what Paul Revere's neighborhood would have looked like when Longfellow, was, y'know, walking here from Cambridge?

Tegan 32:22
So the wharves around the North End, around the Paul Revere House, most of them would have been used, actually,much as in Paul Revere's time, as storage facilities. But it would have looked much different. They would have been larger. They would have taken up more space on the wharves because there would be more cargo coming through. So some of these wharves would have accommodated, you know, steam ships. But many more would have also accommodated other types of maritime transportation, such as, like, passenger facilities started to pop up on these wharves near the North End as well. I would like to say though, that even though Henry Wadsworth Longfellow was here in the late 1850s and 1860, just a couple years later, there was a pretty radical transformation of this area of the waterfront. He would have just missed it. But if he ever went back to the Paul Revere House, he definitely would have seen it. In 1868, the city of Boston built Atlantic Avenue. And Atlantic Avenue still exists today. Visitors often walk through Atlantic Avenue when they come visit the Paul Revere House. Atlantic Avenue was a pretty radical investment. It went right through the waterfront, and it was built to accommodate the Union Freight Railroad. So right after this was built, the waterfront really was changed from these kind of, like...these larger wharfs, absolutely, that had these warehouses that accommodated steamship freight. But after the Union Freight Railroad went through that space, there would have been even bigger warehouses, and they would have grown exponentially because they would have been accommodating this larger amount of freight coming in and being transported through the waterfront due to the Union Freight Railroad. So this is part of the change that I talk about. So, while maritime commerce was persisting, it was continuously declining. And that is why the city of Boston built Atlantic Avenue to accommodate railroad freight transportation by the late 1860s.

Tegan 33:09
That's really interesting. And I imagine there's just a lot of change in a very short period of time when something like that is built.

Genna 33:10
It is yes, yes. It was really radical transformation. And property owners at the time were upset about it. And afterwards they were fine, because it was just kind of like a shifting of business interests. But at the time, it was very intrusive. It spliced through a lot of wharves. A wharf we haven't mentioned yet, but was really famous in the early 19th Century was India wharf. It was this beautiful, large warehouse that was designed by Charles Bulfinch. Atlantic Avenue replaced that, really kind of like symbolically and physically saying that this older type of maritime trade doesn't really exist anymore.

Tegan 34:46
Yeah, wow.

Genna 34:46
So this moment you identified, you know, when Longfellow was visiting, the Paul Revere House, was a really interesting kind of, like cusp moment-

Tegan 34:53
Yeah!

Genna 34:53
-where just a few years later, the waterfront was going to change pretty radically.

Tegan 34:57
Yeah. And of course, Longfellow is writing right on the eve of the US Civil War. Sounds like this project happened right after the Civil War. Economically or otherwise, was there...did the war kind of affect how the waterfront was being changed?

Genna 35:11
Yeah. I mean, I think it changed it quite a bit, really, because what...one thing that the Civil War did was just expand the viability and the extent of railroads. The Union side, especially, relied on railroads to transport all of their goods that they needed for the war. So I think that while the presence of railroads was certainly growing. And in a lot of waterfront spaces in Boston too, after the war, there were all of these networks that were established across the country. So city officials realized that, oh, if we transform even more spaces --- in the waterfront, especially because they're not as productive as maritime avenues of traffic anymore -- if we turn them into railroads, then we can connect them to this new network that has basically been developed during the Civil War.

Tegan 35:54
Yeah, that's really interesting.

Genna 35:55

Yeah.

Tegan 35:56
And you mentioned that in the 1850s and 60s, the wharves looked different from Revere's time, and one of the ways they looked different was they extended out further. Does that mean that the law had changed and people were allowed to build beyond the low tide mark?

Genna 36:10
That is such a great question. So a lot of the wharves in Paul Revere's time were that, like, finger shape that I was talking about. But a lot of them didn't necessarily extend all the way to the boundary of low tide.

Tegan 36:21
Okay.

Genna 36:21
In the early 1800s though, between, you know, 1800 and 1830 or so, people would have extended those wharves even further. And they would have expanded them outwards too, so they would have made them wider. However, I'm really glad that you're bringing this up, because I feel like the way I've been spinning it so far, it just sounds like it's a story of private dominance on the waterfront. That's not completely true. In the mid 19th Century, the state actually did have a growing concern about this waterfront development and this, like, practice of just building wharfs further and further out into the water. So there were new state bodies called the Board of Harbor Commissioners, and then there was a federal-level Board of Harbor Commissioners at one point too. They actually set lines in the harbor, and they said that "you can't actually build your wharf further out than this." And so they actually enforced those lines in the mid 19th Century around downtown waterfront as well. So by the time that Longfellow would have been walking through the waterfront in the 1850s and 1860, the harbor lines would have been in place. So by that point, people weren't allowed to build the wharves further. It would have been further than what Paul Revere saw, but there would have been a legal boundary that said you can't go further than this.

Tegan 37:29
Got it.

Genna 37:30
They may have extended them out wider, or collaborated with their neighboring property owner and said, "can we join our wharves?" or something like that. But they would have had a boundary that said that they couldn't go further than a certain point. The state did have a very large role in regulating the waterfront, and they continue to today. There's an important regulation and legal framework right now. It's called Chapter 91, and it basically means that the state of Massachusetts does not allow new waterfront developments unless they have a water-dependent use or a public purpose. So that doesn't stop private development. Rowe's Wharf, which was built in the 1980s, is a good example of how some developers have really embraced Chapter 91, and have built these more private spaces but have created public walkways on them as well, and other types of public space.

Tegan 38:18
Yeah! Interesting, yeah. So another historical moment that I think about a lot in connection with the Boston history is the first decade of the 20th Century. Because the Paul Revere Memorial Association, which is the nonprofit that runs the museum, formed then. And the house opened as a museum in 1908. So I'd like to get your take on 1908 in Boston. But I also, for our listeners, want to give a little context. So at this moment, the North End was an extremely dense immigrant neighborhood, and Italian Americans were becoming the dominant group in the neighborhood, having been here for about a generation. But previously, it was other immigrant groups who had dominated, most recently, the Irish Americans. And so being this extremely dense and mostly very poor neighborhood, there were a number of initiatives by Progressive Era reformers to uplift the residents here. And that included offering educational and work opportunities. And so a lot of our neighboring institutions histories have to do with that in some way; Paul Revere Pottery, for example, which was named after the Paul Revere House. And a lot of these Progressive Era reforms also included a large helping of paternalism, and encouraging people to "Americanize" at the expense of preserving their own culture. And you know, they felt that part of what they were doing in uplifting was not just providing the education that otherwise poor people couldn't afford, but also saving them from their own culture, essentially. And it was also near the beginning of the historical preservation movement in the United States, which had been going on for almost a generation, but it was still fairly early as a historic house museum. It wasn't a touristy neighborhood at all yet. While many of the buildings are the same as when we opened, the North End was also a very different place at the time. And so this Paul Revere House felt, to many people, I think, both anachronistic. And many of the people who were involved in preserving the Revere House were interested in it as kind of this bastion of what they thought of as Americanism, Americanness, American ideals, in the middle of this weird, little extremely dense neighborhood right by the water. But that's, you know, that's a social history perspective, and it's a kind of a political history perspective. Can you give us the environmental history perspective on 1908 in the North End?

Genna 40:28
Yeah, definitely. So by 1908, especially on the waterfront in the North End, there really was this idea of wanting to reform some of these spaces. And I actually think what you just said is a really great example of one dimension of reform. It was this idea of, like, wanting to build certain institutions in these dense neighborhoods, to "reform" or "uplift" the people that lived there. But another way of reform at the time was actually through new types of recreational spaces. And this was not unique to the waterfront. By the late 19th Century, there was a big push to build many different parks throughout the city of Boston, like Back Bay Fens, building the Public Garden. There was this idea that parks benefited people because they provided fresh air and opportunities for recreation, which at the time, people thought that that could actually, you know, not only improve the quality of life, but could physically ameliorate disease. (Laughs) That was the thought at the time. So because of that, in the North End, and in every other neighborhood in the Inner Harbor area, the city of Boston built waterfront parks. So, they thought this was a really important investment to kind of alleviate the congestion that was perceived at the time as just, like, burdening all of these residents that lived in very dense quarters. But there was also this idea of providing a waterfront space to help with public health, because it provided bathing spaces as well. So this was a bathing beach in the North End, and it was a space for people to swim and exercise. And this was very prevalent by 1908. There were many examples of this. The one

in the North End was called "the North End Beach." It was designed by Charles Eliot of the firm Olmsted, Olmsted, and Elliot, so of the Frederick Law Olmsted tradition. And it opened in 1897 as an extension of the Copps Hill terrace. So, if any listeners have been to the North End, you've probably stopped by the Copps Hill Burial Ground, and you'll notice that there is a terrace that leads down to the waterfront. It's now cut off by a road, but at the time, it was a...more of a connection to the waterfront itself. So this idea of social reform was very much connected to this idea of environmental reform. And it was taking place in the waterfront as well, which is part of what my chapter argues. I have one chapter that talks about both the industrial manufacturing and the parks, because I actually see them as two sides of the same coin. With this new use of turning the waterfront into industrial space, it caused a lot of pollution, and it also was happening at the same time as these more working class neighborhoods becoming more and more dense. This idea of, "well, we need to reform these spaces as well," and that's why we saw many different types of parks take place, but especially waterfront parks in the North End.

Tegan 43:13
Yeah. that's really interesting. And I'm also thinking about what's called the "Paul Revere Mall," or locally called "The Prado," which is, I think, about 1930-

Genna 43:20
Yeah, yeah.

Tegan 43:21
-which had been residential neighborhood, and then that street became a public plaza. So that's kind of a little bit double edged, or maybe a lot double edged. But that was creation of public space later than you're talking about, but still within Progressive Era values.

Genna 43:35
It very much is.

Tegan 43:36
Yeah.

Genna 43:36
Yes. It's the very same idea, yeah.

Tegan 43:38
Yeah, and that's two blocks from us, which is why I mention it.

Genna 43:41
Yes, yes, definitely.

Tegan 43:42

Before we wrap up, because you have this history with the Paul Revere House, I do want to ask if you have a favorite Paul Revere fact, or a favorite Paul Revere House fact that doesn't have to be from his time period.

Genna 43:53
Yeah. I mean, I apologize for maybe not having more of an original answer, but I really just love how the house itself is just so many layers of so many different things. And because of that, I love when someone stands in North Square, you can see essentially four to five centuries of Boston's history. You know, you look at the Paul Revere House, and you see the 17th century. You look at the Hichborn House, and it's the 18th century. And then you know, around the North End is the 19th century. If you look just beyond the North End, you can see very well the rest of downtown Boston, which is the 20th and the 21st Centuries. So I always love to tell visitors that if they wanted to basically see all of Boston's history, they could stand in North Square.

Tegan 44:35
Yeah.

Genna 44:35
That's probably one of my favorite things about the Paul Revere House and the site itself.

Tegan 44:39
Yeah, absolutely. Well, thank you so much for being on the podcast today, Genna. This has been really interesting. I think there's so much more to learn, but we really appreciate your time!

Genna 44:49
Of course. Thank you so much!

Tegan 44:52
Before we close today, we have more content from our micro-interviews with high schoolers who interned at the Paul Revere House for a week in 2025. As part of this week-long internship, each student researched an object in our collection. So one of the interns is going to be talking about the object that she researched, a coffee bag from the 19th Century, and I think the other will be talking a bit more broadly about learning about museums.

Tegan 45:22
Welcome to the show. Could you tell us your name?

Keyana 45:24
My name is Keyana Orcel.

Tegan 45:25
Thank you for being here! So can you tell us one or two things that you learned about history this week?

Keyana 45:29
I learned about the coffee bag. Basically, you could, like, trade the pink bags and for like, books or collector items. It's kind of like a modern day, like, punch card in a sense. I thought that was kind of cool to see. And it showed how everyday things like a coffee bag can be used as a history identifying and marketing strategy, and they use Paul Revere to do that. I thought that was really cool.

Tegan 45:49
Yeah, that's cool! Well, thank you for being on the podcast.

Keyana 45:52
Thank you.

Tegan 45:56
Welcome to the podcast. Can you tell us your name?

Maddie 45:58
Hi, I'm Maddie Lilley.

Tegan 45:59
Thanks for being here. Can you tell us one or two things that you learned about his about history this week?

Maddie 46:04
Yeah, absolutely! So definitely, being at the Paul Revere House this week, I've learned that history, even though it happens one way, there's one story, it can really evolve over time and kind of be changed to fit a certain perspective, or how people want to portray this history. And that can really evolve over time, even with, like a fun fact about Paul Revere that I learned this week, his military history in the Penobscot battle, was it?

Tegan 46:36
Yeah.

Maddie 46:36
How, even then people tried to portray him a certain way-

Tegan 46:40
Right.

Maddie 46:41
-to fit their narrative that kind of goes forward today as well, and what we know about the Midnight Ride, so that was pretty interesting.

Tegan 46:48
Yeah, great, all right. Thank you for being on the podcast!

Maddie 46:51
Thanks for having me!

Tegan 46:55
Thank you for tuning in to Revere House Radio. I'm your host, Tegan Kehoe, and I am the Research and Adult Program Director here at the Paul Revere House. Our production team for this season includes Derek Hunter, Mehitabel Glenhaber, and Adrian Turnbull-Riley. Thank you to RP Hale for the use of his performance on the harpsichord as our theme music. If you're listening online, we encourage you to subscribe in your favorite podcast app so you never miss an episode. Revere House Radio is a production of the Paul Revere Memorial Association, the nonprofit which operates the Paul Revere House Museum. You can find more information, subscribe to our mailing list or social media, or become a member on our website at www.paulreverehouse.org, or come visit us in Boston!