

DPW Commission Meeting
Wednesday, April 16, 2014
7:00 p.m. – Town Hall Conference Room A

7:00 PM Approval Items:

Board of Commissioners Minutes Approval: Commissioner Reed moved to accept the minutes of 3/26/14, seconded by Commissioner Sena, Vote: 2-0.

Approval of Sale of Cemetery Lots

7:05 PM Open Session:

Open for Public Discussion with the Commissioners: Eric Hutchins, 45 Poole's Lane, said a number of years ago, the town received a fair amount of funding, from the National Resource Conservation Service, to restore the gravel pit mess, DPW pulled that effort together. E. Hutchins said he has been doing the ongoing volunteer work. He said this will be lost if it is not maintained. It is an often-used recreation area, and requires a once a year mowing.

7:15 PM New Business:

Long Beach Sediment Transport Study Preliminary Findings: John Ramsey and Sean Kelly, Consultants from Applied Coastal Research and Engineering, were at meeting with an update on Long Beach. Chairman Gardner brought the group up to date on what led to the need for the sediment transport study. He said two years ago, four significant storms removed a large amount of the sand on the beach. The DPW was very concerned about the condition of the seawall. The state's geologist said the beach was so depleted of sand it could no longer support the seawall. He said that led us to think we needed to know how and why the beach was changing and looking forward for the next 50 years.

Long Beach Scope of Work: (John Ramsey)

- Task 1: shoreline change analysis,
- Task 2: wave and sediment transport modeling,
- Task 3: analysis of beach nourishment and coastal structure alternatives,
- Task 4: reports and meetings.

Coastal Processes Overview: There are two ways that sand moves, cross shore movement and long shore movement of sand. Coastal processes: seasonal changes, summer profile vs. winter profile

Storm surge and sea level rise, 100 year storm elevations at different locations, has more to do with the duration of the storm; it's not usually just the surge. Astronomical tide components, atmospheric pressure, wind stress, wave set-up, and run up.

Sea level rise scenarios have come down quite a bit; one foot and 1.5 foot of sea level rise; not six feet. There is some speculation that storm frequency will increase. What you would experience every 100 years you will experience every 10 years by 2100.

Shore Protection:

- Assess need for shore protection
- Determine project goals
- Review of potential alternatives
 - Environmental impacts
 - Ability to meet project goals
 - Economics (seawall was approx. \$15M)

Types of shore protection:

- Soft - Beach/dune nourishment, sand fencing, planting

Advantages:

- environmentally friendly
- Mimic natural system

Disadvantages:

- Design life
- Durability during storm conditions
- Need for maintenance conditions
- Large scale of projects (nourishment)
- Sand fencing
- Dune planting
- Beach nourishment

Hybrid - duneguard, beach dewatering, goetubes

Hard - seawalls, revetments, breakwaters

Hard:

Advantages:

- Ability to “hold the line”
- Design life
- Good last line of defense (storm durability)

Disadvantages:

- Potential alteration to natural processes
- Loss of fronting beach (scour)
- Loss of sediment source to down drift beaches
- Often provides sense of security

Long Beach Study: (Sean Kelly)

- Data collection and analysis
- Wave model development
- Sediment transport model development
- Evaluation of alternatives
 - o Nourishment scenarios
 - o Structural scenarios
 - o Management scenarios

Sources of Data for Long Beach:

- NOS T-Sheets (shorelines)
- RTK GPS Survey (Dec, 2013, shoreline, elevation data)
- Sand sampling of Long Beach
- 1931 Mass. Dept. of Public Works survey for the plan for the original seawall (elevation data)
- LiDAR flights (2007 and 2011)
- USACE WIS wave hindcast (1980-1999)
- Town GIS

Long term loss was approximately one foot every year from 1851 – 1952 (95' loss)

Near term (recent) shoreline change analysis ½ foot each year – between 1952 and 2013 (27' loss) one half of previous loss, the seawall has been holding the line.

Cross Shore profile change analysis

Cross Shore Profile change:

From 1931 prior to seawall to 2010

2013 from RTK survey, substantial buildup of upper part of beach, profile adjusts over time for summer profile (eroded winter profile and summer profile is built back up).

Wave and sediment transport modeling:

Wave conditions come from the Army Corp. of Engineers, wave information study, provides many statistics about waves, records once every hour for 20 years. This is a tremendous resource.

Wave modeling

Sediment transport modeling:

- Transport rates computed along entire length of beach, using 10 meter-wide cells
- Simulation run for 10 years, computations performed every 1-hr of simulated time

Slow recession of shoreline; a slow progression. 40,000 cubic yards of sand is pushed around on the beach; this is pretty healthy. Anything done for nourishment is going to get pushed around.

Beach fill alternatives modeling:

- 825' X 30' wide berm, 50,000 cubic yard nourishment (5 yr. design life – approx.)
- 1650' X 30' wide berm, 100,000 cubic yard nourishment (10 yr. design life – approx.)

Long Beach Management Alternatives: (John Ramsey)

- Do nothing
- Move all back one row
- Put all homes on piles and remove seawall
- Remove wall and dwellings
- Nourish beach – this is viable

It will cost \$2,000,000 for the 100,000 cubic feet nourishment and last for perhaps 10 years. Due to the pocket beach, there is an opportunity to nourish the beach. Supply for nourishment: bringing in from offshore is frowned upon in Massachusetts; upland source would be best due to permitting process. Sand is usually sourced closer; the cost is approximately \$20/cubic yard.

Commissioner Reed brought up the Saratoga and the tip erosion.

J. Ramsey said we have to come up with the best way to deal with that; the town will need a long term plan.

Chairman Gardner said when the wall was built there was 4' of exposure; he asked what the average exposure is now?

J. Ramsey said it varies, it looks to be about 7'.

Chairman Gardner said presumably we've lost 3' of sand. That loss of sand will leave us with less beach over time. From a home protection standpoint, are we more threatened by storm surge coming over the wall, the wall falling over because there is insufficient beach or the wall collapsing due to its bad shape?

John Ramsey said we really need to look at the "do nothing scenario". He said raising the wall isn't going to stop the waves from going over the wall. Something needs to be done about the wave energy. If we move everything back, you lose the front row houses and taking the wall down is a very expensive alternative. You may want to repair the wall over time, but they wouldn't recommend going higher.

Chairman Gardner said during some summers, the high tide is at the wall on a regular basis. If we don't do anything about replenishment, how long before the water is at the wall on a regular basis.

Commissioner Reed questioned why they didn't go to the ends of the beach with the replenishment.

Sean Kelly said the sand will go the ends and it gets disbursed so it's put it in the middle generally.

Director Parisi questioned how much sand is getting into the creek? He said there's an exposed sewer structure, and we have an underground utility. He asked if there is a good case for a hard structure at the end to prevent further loss into the creek?

J. Ramsey said you're on a barrier beach. He said it's hard to meet performance standards in the regulations for putting in a new structure. You'd have to demonstrate that there is no alternative. If there's an existing structure, that's one thing. To make a case for a new structure is difficult. If the structure can be moved, that would be what is expected. Dredging is permissible as long as there is a need.

Commissioner Sena inquired if they were going to take the 1931 wall into account at the end of the study as far as its useful life?

J. Ramsey said we'll look at what will happen both with and without nourishment.

Selectperson Wilkinson asked what the 100,000 nourishment plan looks like.

J. Ramsey said approximately 5,000 truckloads. The beach will have a very gradual slope.

Steve Sheehan, Long Beach, asked if any of the options included an in-water alternative such as wave attenuation.

J. Ramsey said wave attenuation can be problematic for a pocket beach and it is difficult to permit for off shore.

E. Hutchins said the greater threat is from Cape Hedge and migration; he said Cape Hedge wants to continue that migration. Bringing in some stone from Lancaster, I would want to know more about the practicality of any level of sand being brought in that will hold that line. This winter was very close to sending velocity waves all the way through. It's going to flush out; we may not be able to bring it back. We will never get a permit to ever harden that.

John Ramsey said if it breeches much further north, that's not as much of an issue because that may heal itself, if it breeches at the mouth of the creek, that's a problem.

Mel Michaels asked if the estimate of the nourishment lasting approximately 10 years for 100,000 is based on averages and inquired if it would need to be continually re-nourished?

John Ramsey said it's based on long term averages, waves over a 20 year period. He said yes, generally beaches are monitored and communities plan for regular re-nourishments. He said around two years before it is needed, you start planning; you keep the cycle going. If you have a shore protection beach nourishment plan, and material is lost due to a storm, you can apply to FEMA for funding. This is done all over the county.

E. Hutchins said we have a good sense of what changes yearly on Long Beach. He questioned if 40-50% of the replenishment stays on the beach.

Sean Kelly said the sand will stay on the active profile.

John Ramsey said some material will go off and come back.

E. Hutchins said the migration may be more significant than you realize. More long term transects should be set up to get the seasonal changes. You describe a 30' wide berm in the range of 7 to 9'.

John Ramsey said the whole point of an engineered beach nourishment is that we're trying to prevent that overwash from coming up over the wall. He said you have never seen that volume of material in front of that wall; this replenishment will restore it back to the condition before 1930.

Chairman Gardner inquired what happens next. He said we see the sand go out, we've seen significant sand changes. The question on the seawall itself, should we be rebuilding it. If we do nothing; what will be the beach look like? How can we maintain the recreational beach.

John Ramsey said we'd like you to tell us what alternatives you'd like to look at.

Chairman Gardner said we wanted to know what happened over the last 50 years and what will happen over the next 50 years. Maybe the beach is extremely stable, maybe it isn't. We see the sand go out; we don't have a sense of the overall trend or the future. Should we be rebuilding the seawall? He said you have answered that this beach a good beach for replenishment. From a beach goers standpoint, how much longer is the beach going to be there? If we do nothing, then what? How do we maintain the recreational beach?

Selectperson Wilkinson said we just signed a 10 year lease with cottage owners. Going forward, let's look at the realistic options for the town.

Commissioner Reed asked how we can maintain a recreational beach for as long as we can. The beach replenishment seems like a good option.

John Ramsey recommended starting with the "do nothing" option so the town can review it.

ATM Article R: Swap Shop, Book Barn & Metals Pile: Chairman Gardner said no one was allowed to rebut the motion at town meeting. If we made our point at Town meeting, he said he thinks the voters would have agreed with the commissioners. He said he would have been happy to let the voters decide if they had an opportunity to listen to both points of view.

Ted Tarr, Main Street, said there was plenty of time for a rebuttal. No one from the Board of Commissioners was at Town Meeting.

Chairman Gardner said the Moderator asked if it should go forward without rebuttal and it did. He said this is a non-binding question. He said he would be happy to move forward with what the voters decided if both sides were heard.

Commissioner Reed said he has a fundamental issue with the metal pile, items could be rusty, people crawling over it, and suing the town, the town would be liable if someone is hurt. There is income that the town gets from the metal pile, it may only be \$10,000 each year, but it is income. The town should be getting the revenue. People take the metal that the town could sell and they sell it themselves. He said we've had issues with bad behavior at the metals pile; we don't have the DPW staff to police this. The other thing is there is section where people can put metal. The whole intent of the swap shop was not for the DPW to run it, but for a town committee to run it. We're going to look at the whole Transfer Station and see if we can design a better system.

Toby Arsenian, 95 Granite Street, said it's admirable to examine the dump, traffic patterns, etc. If it's going to turn into an increase of the fees, he doesn't think the voters will support funds for the changes to the transfer station. He said if you don't feel like you're bound by town vote, why worry about it. He recommended T. Tarr's motion go to Fall Town Meeting.

Chairman Gardner said he couldn't be at town meeting but Commissioner Reed was prepared to speak but wasn't given the opportunity.

Selectperson Wilkinson said she was prepared to speak on it at Town Meeting as well but didn't have the opportunity.

Bob Burbank said he was disappointed. He said moving to cut off the debate was out of hand. Someone should have had the opportunity to make their case. Unfortunately, the question really is about the metal pile. He said it was a bad situation when he was on the board of commissioners. When that metal hits the deck, it's the town's property. It's a policing problem; you don't want people climbing in the dumpster.

Toby Arsenian, 95 Granite St., said have it at fall meeting, but it should be divided into two motions. The metals pile on one, the book shop and swap shop on the other.

Selectperson Wilkinson said if the petitioners wish to put another petition together, they can do that. The Commissioners are not obligated to do anything.

Chairman Gardner said it's an accident waiting to happen. Cars are backing out and pulling over and it creates a problem up there. The whole design needs to be looked at. The costs for the town are going to increase. The town will lose revenue from the metals pile and staff costs will increase with policing the swapshop.

Commissioner Sena said Ann Fisk had her own group that policed and maintained it; we lost that. Now the DPW is doing it, unless the community re-establishes a committee, we're not going to do it.

Chairman Gardner said the Transfer Station will be open on Sundays from May to November, he asked about the specific dates.

8:30 PM Ongoing Business:

City Hall Systems: Director Parisi said the website went live as of 4/14/14; stickers will be mailed out starting on 4/21/14. Stickers will be available at town hall on 5/12/14. There's another meeting scheduled with City Hall Systems on 5/1/14 to work on the credit card portion of the sales transactions.

8:45 PM Ongoing Capital Projects

- Bedrock Wells bid is tomorrow.
- National Grid easement was approved at town meeting; legal counsel is reviewing the draft.
- Water needs assessment is still ongoing. Dewberry will be here tomorrow; they will have preliminary information for us.

8:55 PM Other Issues of Discussion

Commissioner Reed moved that the Commissioners sign a new Inter-municipal Agreement with the City of Gloucester for the Collection, Treatment, and Disposal of Wastewater at Long Beach, second by Commissioner Sena, Vote: 3-0

J. Parisi said the DOER grant applying for \$100,000 for new lighting for water and sewer plan has been submitted. He said fifteen other communities are applying for this grant as well.

Commissioner Sena questioned if we're going to have National Grid come in. J. Parisi said Weston and Sampson are consultants for National Grid.

Commissioner Reed said the City of Salem now owns all of their own lights. J. Parisi said he's not sure if that's the model that is right for Rockport. He said all those lights need to be maintained.

It was questioned if the contract has been signed by the Board of Selectmen for the Building Study.

Community House Facilities Manager: Chairman Gardner, Asst. Director Olson, and Director Parisi are conducting the interviews. Chairman Gardner recommended selecting the top candidates and meeting with them first; there are nine total applicants.

J. Parisi said he has received requests for new sewer connections for two failed systems on Hodgkins Road. They've joined together to connect, manhole with a lot of connections, transition manhole to keep it separate. Chairman Gardner said if it's an established residence and they're failing, we are obligated to do it.

Commissioner Reed questioned the C. A. Tool Company; he asked where does the town's property end in front of the old shop? Director Parisi said it's hard to determine, it almost seems like they own a bit of area before their property, he said he'll have to take a look at it. Commissioner Reed said what about sidewalks.

T. Arsenian said this is not a Planning Board issue; these houses are ANR.

Paving Plan: Director Parisi said there is \$28,000 left for paving that should be spent before June 30. He said these funds are intended for winter damage (Granite Street, Railroad Avenue, Penryn Way). He said Chapter 90 funds will be available after 7/1/14; then we'll look at the paving program for the rest of year. J. Parisi said the assessment on the pavement management software will be in May, 2014. J. Parisi said we will need to put it back out to bid. It will be on a very specific job instead of unit pricing.

Commissioner Reed inquired if Director Parisi had been out to see the abutter on Seagull Street. Director Parisi said they wanted a Cape Cod berm there; he said it would be difficult to do; we left it as it is. He said parking by the students is creating a problem there. Commissioner Sena said how about establishing property lines. J. Parisi recommended having the Traffic Committee establish no parking on that side; there are some different options.

Next Meeting: Wed., April 30, 2014, Community Room at the Police Station

Commissioner Reed moved to adjourn, seconded by Commissioner Sena, Vote: 3-0.

Tickler List:

Energy Efficiency

Community House Facilities Manager

Sewer Use Regulations

Transfer Station Redesign

DPW barn

Status of Objectives