

Hi Mike- following up on my phone message:

The limit of work line is proposed at elevation 3.7' (Spring High Tide). We prefer to maintain this limit rather than go any higher in order to maintain the occasional tidal flushing that we discussed yesterday by phone and that was noted in your original comments (re: the berm). Additionally, as discussed yesterday, this limit of work avoids impacts to the healthy marsh system. Impacts would occur above the Spring High Tide line (elevation 3.7'), in areas where upper high marsh vegetation was observed but above jurisdictional salt marsh which occurs below elevation 3.7'.

Please call me on my cell phone (774) 454-4759 to discuss at your earliest convenience, as we are at a point now with the grading where we do not want to proceed until we finalize this with you.

Thank you-

Stacy H. Minihane, PWS

Associate

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 BTI Email Signature.jpg

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From: marsh.mike@epamail.epa.gov [<mailto:marsh.mike@epamail.epa.gov>]

Sent: Wednesday, October 31, 2012 3:37 PM

To: Eric Las; Stacy Minihane

Cc: Christopher Morris; Chet Myers

Subject: RE: revised planting table (Rivers End)

Stacy, Eric - One question I have regarding the rough draft you sent last night for River's End Park. Can the limit of work line in the southern portion of the site be raised to a higher elevation? Limit of Work needs to go down to the lower elevations in the vicinity of the current swale, where you are tying in the lower contours, but I think it could be demarcated at a higher elevation where you are grading at higher elevations in the southern portion of the site, to avoid any potential for impacts of the existing wetlands.

Please let me know what you think.

Thanks,

Mike

Michael Marsh

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"Eric Las" ---10/30/2012 06:24:18 PM---Mike – Attached is the latest pencil sketch that I've come up with based on our discussion this afte

From: "Eric Las" <elas@btiweb.com>
To: Mike Marsh/R1/USEPA/US@EPA, "Stacy Minihane" <sminihane@btiweb.com>
Cc: "Christopher Morris" <CMorris@apexcoss.com>, "Chet Myers" <cmyers@apexcoss.com>
Date: 10/30/2012 06:24 PM
Subject: RE: revised planting table (Rivers End)

Mike – Attached is the latest pencil sketch that I've come up with based on our discussion this afternoon, if you want to take a quick look. I'll let Stacy respond regarding the other points of your e-mail. Thanks. -Eric

Eric J. Las, P.E., LEED AP

Principal

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From: marsh.mike@epamail.epa.gov [<mailto:marsh.mike@epamail.epa.gov>]

Sent: Tuesday, October 30, 2012 6:19 PM

To: Stacy Minihane

Cc: Christopher Morris; Chet Myers; Eric Las

Subject: RE: revised planting table (Rivers End)

Stacy - Just wanted to let you know that I discussed the latest conceptual design for Rivers End Park with the Corps, and I believe we are all generally on the same page regarding the direction of the design. It's difficult to go over this kind of thing over the phone, so I suggest that in the interest of time you may (if you think this might be beneficial) want to send us a penciled in (or otherwise rough draft) conceptual drawing for what we discussed, to make sure there are no major misunderstandings about the concept.

Again, my conceptual plan was for "horseshoe" shaped contours, sloping high to low from south to north, with a "tongue" of lower elevations in the middle of the "horseshoe". Wetland planting zones should be established using the on-site wetlands as a reference site. Also, we acknowledge that to establish a functioning wetland system, it may be necessary to have some impacts to existing upper high marsh where the contours of the creation are tied in. However, we want to assure that the design minimizes these impacts to the greatest degree possible while still being functional.

There still seems to be some confusion about the location of an existing berm... the plans dated 10/30/12 do not appear to indicate the presence of a berm, according to the existing grading contours. Are the depicted existing grades accurate?

Lastly, with this design creating a broader high marsh area toward the southern end of the site, we believe that the previously proposed high marsh island in the northern portion of the site should be replaced with low marsh. If you think this is problematic, please call to discuss further.

Thanks,

Mike

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From: "Stacy Minihane" <sminihane@btiweb.com>

To: Mike Marsh/R1/USEPA/US@EPA

Cc: "Christopher Morris" <CMorris@apexc.com>, "Chet Myers" <cmyers@apexc.com>, "Eric Las" <elas@btiweb.com>

Date: 10/30/2012 01:02 PM

Subject: RE: revised planting table (Rivers End)

Mike- please see the attached in-progress pdf of the grading to facilitate discussion. I will call you to discuss your below comments.

Thank you,

Stacy H. Minihane, PWS

Associate

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From: marsh.mike@epamail.epa.gov [<mailto:marsh.mike@epamail.epa.gov>]

Sent: Tuesday, October 30, 2012 11:45 AM

To: Stacy Minihane

Cc: Christopher Morris; Chet Myers; Eric Las

Subject: Re: revised planting table (Rivers End)

Stacy - Hopefully you are doing well after yesterday's hurricane.

This table is improved from the first draft. The table should note that the proposed elevation ranges are subject to adjustment in accordance with observations of the reference wetlands (existing on-site salt marsh).

Also both plans and cross sections should indicate planting zones for various species. Also, the existing salt marsh should be shown on plans and cross sections.

I also have some initial comments and questions about the revised plans submitted in your previous email (below) . I am hoping to discuss the plan revisions with the Corps this morning, so there may be some additional questions or comments to follow.

1. It would be helpful to have plans that show only the existing grading, features.etc. and the proposed grading features etc. I realize that this is a conceptual sketch, but both the Corps and I were having some difficulty discerning various elevations, etc., with the older grading contours and features (e.g., berms, etc.) shown.

2. It appears that the revised plan would involve grading within the existing salt marsh. Any work in the existing salt marsh should be avoided, with exception of the very small fringe areas in the northern end of the site that I discussed with Chris Morris at our meeting at EPA. But the revised design should ensure that all other existing salt marsh areas should not be impacted.

3. Please provide revised cross sections corresponding to the revised plans

4. With regard to your question about mitigation credit, we would give credit for any area that meets the definition of salt marsh - both high

and low marsh.

5. Please confirm the HTL and MHW (3.71 and 2.61 feet (NGVD 1929), respectively, correct?), and indicate their location on plans and cross sections.

6. Please clarify the photo location. I assume the flag is on the post, although there appear to be two posts in the photo. Please clarify the elevation of the flagging, and your comment that the photo shows *Spartina alterniflora* extends beyond elevation ~2.0'. Assuming MHW is 2.61', I would expect *Spartina alterniflora* to grow at ~2.0' (and higher... up to ~MHW). The Corps had commented to us that they thought that target elevations may be higher than 2.0 feet. In any event, as noted before, it is our recommendation that the appropriate elevation ranges for various species be determined from using the existing on-site salt marsh as a reference site.

7. Please specify that 100% biodegradable materials will be used for erosion and sedimentation controls. The Corps noted that some erosion control materials include non-biodegradable structural elements.

8. Please clarify the design and function of the proposed fencing.

9. Plans should specify the removal of rip rap at the northern end of the site, and indicate salt marsh restoration/creation in that area.

10. Please clarify the purpose of the existing foundation at the northern end of the site. Are there future plans to construct something on that foundation, and if so, what? Could future use at this foundation have an adverse impact on mitigation project?

I'll let you know if we have further comments or questions after I have spoken to the Corps.

Thanks,

Mike

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From: "Stacy Minihane" <sminihane@btiweb.com>

To: Mike Marsh/R1/USEPA/US@EPA

Cc: "Christopher Morris" <CMorris@apexcos.com>, "Chet Myers" <cmyers@apexcos.com>, "Eric Las" <elas@btiweb.com>

Date: 10/30/2012 09:12 AM

Subject: revised planting table (Rivers End)

Good Morning, Mike-

Please find a revised planting table below, for your input. I believe this addresses your comments, but please advise as soon as possible if you have other changes. (Note: the colors, areas and plant numbers will be completed upon finalization).

Thank you-

Stacy H. Minihane, PWS
Associate

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| Planting List | | | | | | |
|---------------|------------------------------------|-----------------|-----------|--|---|-------|
| Legend | Tidal Regime | Elevation | Area (sf) | Plant Species | % Coverage/Spacing | Size |
| Color 1 | Low Marsh (Regular Inundation) | Up to El. 2.6' | # | Smooth cordgrass (<i>Spartina alterniflora</i>) | 100% at 1.5' on center, 2 culms per hole (___ plants) | plugs |
| Color 2a | High Marsh (Periodic Inundation) | El. 2.6' – 3.2' | # | Salt meadow grass (<i>Spartina patens</i>) | 60% at 1' on center (___ plants) | plugs |
| | | | | Spike grass (<i>Distichlis spicata</i>) | 30% at 1' on center (___ plants) | plugs |
| | | | | Black grass (<i>Juncus gerardii</i>) | 10% at 1' on center (___ plants) | Plugs |
| Color 2b | High Marsh (Periodic Inundation) | El. 3.2' – 3.7' | # | Salt meadow grass (<i>Spartina patens</i>) | 60% at 1' on center (___ plants) | plugs |
| | | | | Spike grass (<i>Distichlis spicata</i>) | 30% at 1' on center (___ plants) | plugs |
| | | | | Black grass (<i>Juncus gerardii</i>) | 10% at 1' on center (___ plants) | plugs |
| | | | | New England Coastal Salt Tolerant Grass Mix | 100% at 1250 sf per pound | seed |
| | | | | Marsh elder (<i>Iva frutescens</i>) | ___ plants @ 4' on center | 2'-3' |
| Color 2c | High Marsh (Infrequent Inundation) | El. 3.7' – 4.5' | # | New England Coastal Salt Tolerant Grass Mix | 100% at 625 sf per pound | seed |
| | | | | Seaside goldenrod (<i>Solidago sempervirens</i>) | 25% at 950 sf per pound | seed |
| | | | | Marsh elder (<i>Iva</i>) | ___ plants @ 4' on | 2'- |

| | | | | | | |
|------------|--------|--------------------------|---|--|-------------------------------|-----------|
| | | | | <i>frutescens)</i> | center | 3' |
| Color 3 | Upland | El. 4.5' and up | # | New England Coastal Salt Tolerant Grass Mix | 100% at 625 sf per pound | seed |
| | | | | Eastern showy aster (<i>Eurybia spectabilis</i>) | 25% at 950 sf per pound | seed |
| | | | | Threadleaf coreopsis (<i>Coreopsis verticillata</i>) | 25% at 950 sf per pound | seed |
| | | | | Beach plum (<i>Prunus maritima</i>) | ___ plants at 6' on center | 2'- 3' |
| | | | | Northern bayberry (<i>Myrica pennsylvanica</i>) | ___ plants at 6' on center | 2'- 3' |

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