MOUTH OF COLUMBIA RIVER BENEFICIAL USE PROGRAM WORKSHOP

December 7, 2018; 9 am – 4 pm
Holiday Inn Express: Astoria, Oregon

WORKSHOP SUMMARY

SYNOPSIS

As follow up to a May 2018 Science Policy Workshop, the Lower Columbia Solutions Group (LCSG) conducted a December 7, 2018 workshop to check in on work at the South Jetty and North Head sites in summer 2018 and to plan for 2019 placements and field study. Results of an assessment of how best to move forward with the Mouth of Columbia River (MCR) Beneficial Use Project were also shared. Approximately 35 persons participated.

Preliminary results of 2018 field work were shared. At the South Jetty Site, approximately 400,000 cubic yards of material were placed in 2018. As a pilot project at the North Head Site, 51,000 cubic yards were placed to create a 2' berm approximately 5,000 feet in length. At the end of two months, only 17,000 cubic yards remained in a one-foot mound, likely due to the "washing machine" conditions and large wave action in the area. Modeling will be used to help determine how much sand moves shoreward over the long term. A new buoy will be deployed to measure wave height and movement next summer.

Monitoring of crabs at both the South Jetty Site and the North Head Site indicates no evidence of increased mortality and no long-term effects. Tracking of tagged crabs and video monitoring shows them to be highly mobile and generally migrating to the north. Unknown are cumulative effects and the extent of northward migration.

On MCR's south side, accretion is generally occurring. A small area of erosion at the root of the jetty will be addressed in conjunction with jetty repairs in the next couple of years. On the north side, there is a strong erosion trend south of North Head. This is in contrast to the rest of the coast north of the jetty. Sand is not coming back into the system after large storm events, creating a sediment-starved system that doesn't have the material it needs to recover. The erosion at Benson Beach is particularly troubling as it is close to the sediment source and it is the area most eroding.

At the North Head Site, the group agreed that the U.S. Army Corps of Engineers (Corps) should proceed with a second stage of the pilot project in the phase two area with a change in orientation to be parallel to the beach. USGS's sediment transport model, modified to reflect different current regimes, can be used as a surrogate for the tracer study unless funding can be obtained for such. The technical team was tasked with developing the details of a second phase, with the caveat that the placement volume not create a feature any greater than two feet. The overall goal is to demonstrate that the Phase 2 area is a dispersive site, while understanding where the sand is dispersed.

At the South Jetty Site, the group agreed that it has been demonstrated to general satisfaction that there are no adverse effects on crabs but benthic and infauna studies are still needed. The technical team was tasked with developing a plan for these additional studies.

In a panel discussion on erosion at Benson Beach, Washington State Parks & Recreation representatives indicated that oceanfront camping sites have been lost over the past several years, resulting in closing camping at oceanfront camp sites at Cape Disappointment between November – April. Dale Beasley framed it as a question of whether the park is to be saved; nearshore placement will have little, if any, impact on erosion. For the Corps, the challenge is obtaining funding and, while direct beach placement yields the best benefit, it needs to be undertaken in conjunction with nearshore disposal. Pump ashore with a hopper seems to be the best technology at this time, but the cost is currently prohibitive. Increasing the volume of placement at the Shallow Water Site at the end of the jetty might help reduce erosion at Benson Beach. It was agreed that this conversation needs to be continued and the technical team was charged with framing the parameters for that conversation and the questions to be further explored.

In response to direction received at the May 2018 Science-Policy Workshop, Jim Owens shared the results of an assessment and recommendations on how to move forward on the MCR Beneficial Use Project. The assessment focused on the types of services desired/needed for the LCSG, how best to obtain these services, their cost, and how to fund them. Brian Lynn indicated that a departure from the long-term arrangement with the National Policy Consensus Center (NPCC) for facilitation and coordination is proposed and reviewed the proposal for a Cooperative Agreement through Washington Department of Ecology (WDOE). Steve Greenwood, representing the Center, indicated wholehearted support for this new arrangement and congratulated the group on its accomplishments. WDOE will become the fiscal agent and contract manager and seek contributions for LCSG's work through Cooperative Agreements with LCSG members and other interested parties. The Oregon and Washington Coastal Management Programs both committed to contributing at least $5,000. Brian and Patty Snow will be making contacts to ask how much each organization can contribute and asking for guidance on the scope of work to go into the Cooperative Agreement. The short-term goal is to secure adequate funding for a spring workshop to maintain the group's momentum.

Participants then were divided into three groups to discuss ideas for creating a case statement that can be shared with public, legislators, other agencies, funding sources, etc. While an excellent video has been produced by NPCC on the group's successful collaboration process, a case statement has not been prepared about its accomplishments on projects.

MEETING NOTES

ATTENDEES

Washington Department of Ecology: Brian Lynn, George Kaminsky, Penny Kelly, Felicia Ouleta-Schult, Alex Rosen, Rick Mraz
Washington Department of Fish & Wildlife: Dan Ayres, Lauren Bavernschmidt, Carol Henry
Washington State Parks & Recreation: Josh Bell, Matt Niles
Washington Department of Natural Resources: Rick Schwartz
Oregon Department of Land Conservation & Development: Matt Spangler

Oregon Department of Fish & Wildlife: Scott Marion
Oregon Department of State Lands: Blake Helm
Oregon Sea Grant: Patrick Corcoran
Corps of Engineers: Jarod Norton, James McMillan, Rod Moritz, Elizabeth Santana, Kate Wells, Rachel Stolt
Environmental Protection Agency: Bridgette Lohrman, Jen Anderson
NOAA Fisheries: Curtis Roegner
Columbia River Crab Fishermen's Association: Dale Beasley
Columbia River Bar Pilots: Steve Ackerman
National Policy Consensus Center: Steve Greenwood
CREST: Denise Lofman, Hannah Dankbar
Willapa/Grey Harbor Oyster Growers: David Beugli
Congresswoman Herrara-Beutler: Dale Lewis
Facilitation team: Jim Owens, Alisha Morton

WELCOME, INTRODUCTIONS AND PROGRAM BACKGROUND

Jim Owens, Facilitator, welcomed participants. Brian Lynn, WDOE, gave an overview of the agenda. He then asked for a round of introductions.

Brian provided a brief history of the Lower Columbia Solutions Group (LCSG).

- The effort started in 2002 as a bi-state effort that was convened by the two governors at the time.
- Purpose was to focus on challenges in the Lower Columbia River, i.e. channel deepening.
- Funding has never been consistent or firmly established and has varied over the years.
- Group consists of state, local and federal entities and other non-governmental groups. Ports (especially the Ports of Astoria, Ilwaco and Portland) have participated as well.
- After channel deepening, focus shifted to regional sediment management and ultimately to development/approval of a Regional Sediment Management Plan (RSMP) in 2011.
- We are in the midst of implementing the RSMP. We have been determining what to do with the sand dredged from the mouth of the Columbia and how to use it in the most beneficial way possible, i.e. sustaining beaches, reducing erosion and shoring up the jetties.
- The RSMP identifies current and future beneficial use disposal sites. It is built around an adaptive management process. In 2012 or 2013, we came back to this group to confirm if we are all in this and that it is still important. There was a resounding nod from the group that the process is beneficial and that there's a desire to have a neutral third party coordinating the effort.
- The Governors' offices are no longer engaged as they were historically. Two years ago, the group agreed to shift convening and management to the two states' coastal management programs.

SUMMARY OF MAY 2018 SCIENCE POLICY WORKSHOP

Brian Lynn provided a summary of the areas of discussion and action items from the last Science-Policy Workshop in May 2018. *Summary of May 2018 Science Policy Workshop* was provided as a handout; the PowerPoint Presentation can be viewed here:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/1-summary-of-may-2018-workshop-and-meeting-goals.ppt

Discussion
Rod Moritz, Corps, commented on the bullet: "As identified at the 2016 Science-Policy workshop, the potential remains for breaching of Clatsop Spit's foredunes with a series of severe storms." That potential is likely much diminished since the Corps protected the foredunes.

Rod also said the Deep Water Site was designated in part because of the agreement with the states on Columbia River channel deepening. The Corps has not used it as of yet for disposal of materials dredged up to River Mile 30, but the site is authorized for such. The Corps is considering it as an alternative but would like to entertain using the nearshore beneficial use sites rather than the deep-water site.

PANEL DISCUSSION: PRELIMINARY RESULTS OF 2018 FIELD SEASON / RECOMMENDATIONS FOR 2019 FIELD SEASON

South Jetty Site – Results of 2018 Field Study
Curtis Roegner, NOAA Fisheries, gave a presentation on the Mouth of the Columbia River Crab Telemetry Study. The PowerPoint Presentation can be viewed here:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/2-mcr-crab-telemetry-study.pptx

Discussion
James McMillan, Corps, asked if only male crabs were being monitored. Curtis said both male and females are tagged for monitoring. Jarod Norton asked if the crabs were studied at different times of the year. Curtis said the monitoring is timed to dumping. There is also concern disrupting molting if crabs are disturbed earlier in the year.

Pat Corcoran, OR Sea Grant, asked if there was evidence of the dumping creating a food pulse. Curtis said they can't really tell from the video and the campods are baited.

Rick Mraz, WDOE, asked why the crabs are going north. Curtis said that is unknown. George Kaminsky, WDOE, asked if the northern migration could be due to the northward current so there would be no incentive to move south. Curtis said they are moving and using energy, so they must have a reason. If they stay at the site, they can just burrow and therefore wouldn't be using energy. George asked if the time staying on the south side being higher could be

related to disposal in the south. Curtis said yes that he just got the data, so he needs to check the dredging / dumping timing.

Rod Moritz asked Curtis if he could summarize the effect between the control site and the North Head Site crab release area. Curtis said they don't have the telemetry data back yet, so he did not want to comment in detail yet. They will be getting that data back soon and reviewing it fully.

Rick asked if they are monitoring any other species. Curtis said not directly. Four great white sharks have been observed at the South Jetty Site; also, a lot of tagged sturgeon.

North Head Site – Results of 2018 Field Study
Jarod Norton and Rod Moritz, Corps, presented a Summary of Initial Dredged Material Placement Operations at North Head site (NHS) & Evaluation of Bathymetry Response. The PowerPoint Presentation can be viewed here:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/3-summary-of-initial-dredge-material-placement-options-at-north-head-site-and-evaluation-of-bathymetry-response.pptx

Discussion
Brian asked where does the sand go? How much do we know? Rod said running the model will help calibrate that. It is hoped that this new data will help answer these questions.

James McMillan, Corps, said the Corps has a contract to deploy an ocean measurement buoy to measure wave height and movement next summer. It will measure the current through the column at three points along the mooring. It will measure salinity and temperature as well.

Bridgette Lohrman, EPA, said the depth over disposal site is 35-50 feet and asked if there is any difference or if it's better to place it shallower or deeper. Rod said the disposal line was set up to align with the swell coming in and that, at 40 – 50 feet, the whole area is being uniformly eroded. He said there is no preference as far as depth except maybe shoreward.

Scott Marion, ODFW, said regarding presentation slides 14-17 "survey difference in mound height", that the net change is displayed on the mound itself and asked if the surrounding area has changed in elevation. Rod said they deleted anything below 0.2, as they only wanted to show changes to mound height. Scott asked if the sediment eroded off the mound is locally dispersed or did it leave the entire study site. Rod said the material is not dispersed like a plume coming off the mound, but more like smoke. He said there might be material coming off in a teardrop but they can't actually detect it.

Brian asked how much of this type of placement could be done. Jarod said this is a project to see how the site responds to the thin layer placement. Operationally, material wouldn't be

placed in this fashion, but rather more like at the South Jetty Site. He said this is status quo for in-water placement.

North Beach Erosion through Summer 2018
George Kaminsky, WDOE, presented an Update on MCR-North Beach Erosion (through Summer 2018). The PowerPoint Presentation can be viewed at:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/4-update-on-mcr-north-beach-erosion.pptx

Discussion
Rod asked if PC004 is sustainable. George said it's a nice pulse of sand because it's the erosion is so bad to the south. He said he would not count on this accretion rate.

Josh Bell, Washington State Parks, asked if there was anything going on with swell direction at the Benson Beach site with the shift in the last 2-3 years. George said it is worth looking at the details as it stands in contrast to the rest of the coast. He said it could be more attributed to less feeding from the shallow water sites and the supply coming into the system. George said the key point is that sand is not coming back into the system after these large events. It's a sediment-starved system and doesn't have the material it needs to recover.

Captain Steve Ackerman, Columbia Bar Pilots, asked if there are any other studies to the north or south that would be beneficial to this effort. George said on the Oregon side we could consult with Jonathan Allen, OR DOGAMI, or look at NANOOS. He said they do have the data available and in Washington they have accreting beaches but there are erosion exceptions, i.e. Benson Beach. He said that is concerning because it is close to the sediment source and it's the most eroding.

North Head Site – Pilot Project
Penny Kelley, WDOE, discussed the permitted pilot project at the North Head Site for 2018. Key points included:

- Washington's 401 Water Quality Certification allows for phase two of the project to be completed in two other locations.
- A phase two project would need to duplicate the 2018 project more or be smaller but at a different location.
- Funding needs to be secured.
- The 401 Certification authorizes the pilot to determine the location to do a second run.
- Amendments to the 401 Certification would be needed if the pilot project were modified.

Discussion
Brian asked if a new permit would be needed if we were going to move past the pilot stage to using the North Head Site as a permanent site. Penny said the 401 Certification is intended to

help pick a permanent site. The 401 Certification could be reissued at five years and it could become part of the list of permanent sites that can be used for disposal.

Jarod said a second pilot placement could help show whether we want to do something slightly different, such as line orientation of the disposal.

George said regarding the discussion with Rod earlier and question of seeing any dispersion from berm to outside the berm placement, he said it is so thin that it's not really measurable and detectable. It is incredibly challenging to get data this accurate and separate the signal from noise. He said they went to minimum cross section of volume of berm and we can see it flattening out and eroding over time. George said they see the dispersion but can't really track where it is going or where the plume is settling out. His pitch would be to bump up the volume a little bit in a second phase to be able to see which direction it's dispersing and the get some sense of direction and rate from the site itself. He said we might need a larger test site to understand sediment transport.

Scott said that we are providing an edge and erosions happens at the edge of the mound. He said it looks like the off-shore and nearshore end are losing more than in the middle. He said he's having trouble seeing how we translate what happens to the dispersal from what we see coming from a mound. We also need to consider whether the data is relevant for what we would do in a larger scale disposal site.

Dale Beasley, Columbia River Crab Fishermen's Association, said we need tracer studies to see how long the sand stays and where its goes. He said it doesn't matter what type of mound you build if you don't have tracers to see where the sand goes. Jarod said larger areas and tracer studies would be great but funding them would be very difficult. Rod added that tracer studies are really informative but take a lot of time and are expensive. He said the group needs to know that it is not a silver bullet. Jarod said he thinks it's a great idea but asking for that money on top of the normal dredging program may be problematic. Rod said the Corps did a tracer study for the Shallow Water Site (SWS) and at the same time the USGS did a sediment transport model to emulate the study. He said if we could bridge the real with the model using the tracer evaluation in the model to see what is says it could be beneficial. He said USGS is going to do a model of the work just completed at the NHS and because they've been involved in the process since 2003 developing the model, we should be able to trust the model.

Bridgette Lohrman, EPA, suggested the sediment transport model as an intermediary step. She asked what the risk is of the model being slightly off – is it a big or small risk. Rod said it is ground-truthed at the Shallow Water Site but the question is if it is accurate to the south below Peacock Spit.

George asked how well we could compare the berm behavior to thin layer disposal where it is not creating any feature. He said we don't see much difference of dispersion from 40-50 feet; it's pretty much uniform with more movement on the edges of the transect. George said that the feature is so small relative to the background. He said it's pretty low dispersion and

probably lower than we expect. We're still so small relative to background that we are well within natural bathometry dispersion. If we were building higher features, then we would have to rethink things.

Curtis said his impression with the mound project is that it was a one-off thing and not an operational approach for future placements. He said we would want to have a lot more research if it was going to be a mound. Thin layer has minimum impacts.

Rod said he was glad Penny mentioned a phase two of the pilot project. He agrees that we should do the same thing again but in the north area of the north head site instead of the south end. He said they could slightly tune what they did in the south side to move the orientation of the disposal line parallel with the shore. He said this would show us a lot. They learned a lot this year and this could be more data. Penny said there was a reason the dredge went in on the angle it did. She asked if it would affect their ability to do the placement. Captain Ackerman said from an operational sense it would all be weather dependent. If it was 3-5' waves it would be doable, but it would be more difficult if the waves were larger. He said swell and current could also impact how the dredge material moves as it's dropped. Rod said they specifically did it this way because it was the first time doing it and they wanted to be sure they could stay in the straight line. He said they would ask the crew if we moved it shore parallel if they could do it and it sounds like probably yes.

Brian said what we're really trying to figure out is how well do we understand where the sand goes when we put it in this area. Modeling is the best tool to make the assessment. He asked if doing some other iteration of this pilot helps further inform the modeling. Rod said that, because the NHS is fairly long, the transport characteristics might change from the north to south end of the site. He suggested using the model to look at the data and using the pilot to ground truth the model.

Penny said another goal of the 401 Certification is to enable this group to come back to WDOE and ask to ramp up the placement volume and for a permanent location. She said the study is supposed to figure out where the best place(s) are in the North Head area.

When asked about potential placement locations, Dale Beasley said it makes no difference to him, as long as the sailors and the crabs are healthy.

Dan Ayres said he is excited to have the ability to do placement at a North Head Site. He asked if there were any issues with the crab fisherman. Curtis said the only issue was the delay in putting out pods due to so many crab pots in the area. He said it's a small area so perhaps we could work with the crab fisherman to see if they could avoid that area so we could get out earlier.

Scott questioned if we should be considering design changes for a second location. He said we measured the rate of sediment disappearance but we don't know where it went. If there is a reconfiguration to get bathometry detection above the noise level it would be all different data.

He said there is benefit in the two iterations of similar design in two locations but he's concerned that this will again tell us that it disappears from the mound at a certain rate but not where it goes.

Rick said it's a dispersive site and that is one thing that we wanted to know with this pilot project. Scott said this information is telling us where the Corps would ultimately want to place a site.

Penny asked if the material would behave differently in a different part of the site, and if this disposal site is small or comparative. Rod said it is a large disposal site. George said, in general, in the area between North Head and the North Jetty, the circulation pattern works its way north then on shore then southward. He said there is a bit of a divergence zone in this site. George said the currents in the north are very different then the currents in the south. He said he supports making phase two larger / bigger to see where the material goes.

Penny said if it can behave differently, do we need to answer the question if it is dispersive enough. She said right now it's set up to do phase two of the pilot study, but if too much is changed then we have to look at amending the permit. She said the core question for her is that we have to make sure that is disperses and asked if we still need to answer that for the north part of the North Head Site. Rod said yes.

Dale said it's important to remember that the sediment moves more in one storm in the winter than it does during the whole summer.

Jim asked if there was general support for a second phase of the pilot project with a change in orientation parallel to the beach and using the sediment transport model as a surrogate for a tracer study (unless we get funding for a tracer study). The group agreed.

Jim said, after the May workshop, the technical team developed pilot project details / program and then circulated it to the group. He asked the group if they would like to kick this to the Technical team to ferret out the details. Rod agreed, with the guideline that we stay within the permit conditions. He said the permit was for 30-100k cubic yards. Penny said it's written at 30-35k yards unless otherwise approved by WDOE. That is what allowed the Technical team to come up with the volume that would allow a berm. Jarod said for the 2018 plan they built in 100k because they did not know how accurate the drop would be to get to the two-foot height. He said the two-foot height of the berm was the goal, not so much the volume. Rod said even though they built in the flexibility to go up to 100k, it was conditional on getting to two-foot height.

James asked how normal dredging / thin layer placement would perform in the southern half of the North Head Site. He asked what it would take to do a thin layer placement of a few hundred thousand cubic yards in the south side. He also asked if there is any interest in placing additional material in the southern end of the site. He said the southern third of the site is 1.5 square nautical miles and if you put a million cubic yards over the whole area would still only

end up with 6 inches. James said with 300k yards disposal you'd have an inch give or take. Jim suggested referring this to the Technical team for further review and guidance. He suggested having them draw up a proposed plan for phase two of the pilot project. Penny added that what James suggested is really adding to the scope of the pilot and would most likely require a permit amendment.

Penny said the sediment model is going to be key. George agreed that we should learn from the sediment model before going into phase two.

Jim asked if there is additional research needed at the South Jetty Site. Curtis said most of the studies have been centered on the fate of the crabs and as far as he can tell the crabs are not harmed from thin layer placement. He said there are a lot of other questions, i.e. what's in the benthos; does that change over time; does the introduction of food bait have impacts. Curtis would like to move further north and start doing experiments up there. He said if we did more studying in the South Jetty Site, it should be a benthic faunal study.

Scott said we can assert that there are not significant impacts to adult crabs, but we don't really know how juveniles are using these sites or larval. He said maybe we can't know that because it's harder to study. Curtis said they put crab traps out a lot and don't see a lot of the little crabs. He said if they did they would be harder to tag but they could get smaller tags. Curtis said they have been mostly looking at larger crabs but they don't see the smaller crabs on the videos either. He said maybe it's because they don't want to be there because the adults are cannibalistic. Curtis said given all that, the effect of placement is minimal on adults and smaller crab could potentially be more impacted. He said crab movement and habitat preference is really unknown. He said we don't want to do anything that would affect where females are breeding their young.

Dale said that we've done quite a bit of video on the bottom and haven't seen any small crabs. He said years ago they did offshore research and kept track of the crabs they would pull out of a crawdad trap and never saw little ones. He suggested that perhaps they are more estuary dependent.

Jim said if there is additional research that we need to do, then we would rely on Curtis to develop a work plan. Curtis agreed that he would bring something back taketo the Technical team.

Scott said cumulative and / or food impacts need to be researched more. He said if we were talking about continued operation at the scale that we've been doing we wouldn't want to be transferred to the long-term sign off without looking at cumulative impacts. Jim said as part of the RSMP when we get to a comfort point, we can ratchet down the research that we are doing but if we exceed any triggers then we would need to regroup. Brian said there will be limited resources for monitoring, so we need to figure out the priorities.

Dale said that even if we don't actively study the South Jetty Site, his crab boats would tell him if they see any impacts from placement. He said Site B has had impacts and they have ongoing monitoring from the fleet. He also suggested getting a pot or two made of smaller netting to get feedback on the smaller crabs.

PANEL DISCUSSION: BENSON BEACH PLACEMENT

Status of Erosion / Response Program at Cape Disappointment State Park
Josh Bell and Matt Niles, Washington State Parks and Recreation, gave a presentation on storm damage to Cape Disappointment in January 2018. The PowerPoint Presentation can be viewed here:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/5-state-parks-cape-disappointment-overview.ppt

Additional key comments included:

- Since 2000, overnight accommodations are not permitted at Cape Disappointment between November – April. This saved many injuries during the January 2018 storm incident.
- On-shore placement is welcome to avoid issues like this. They recognize they are stuck with the current situation in the interim.
- The existing Cape Disappointment State Park Master Plan is now obsolete, i.e. adding camping sites on the beach, as it's not possible or safe now. The timeline of the master plan and what can happen today are not congruent.
- There are four new restrooms authorized in the current plan and we will be doing the ones furthest inland first.

Discussion
Rod asked where they would want onshore placement. Josh said near the campground infrastructure and parallel to the jetty would have the most beneficial impact to the visitor base. He said erosion is on the southern area and there's no primary dune left. Dale said the County Shoreline permit for direct beach placement doesn't go that far north.

When asked when sand was last placed on Benson Beach and how long it lasted, George said it was placed in 2010 and there was a little bit of erosion decrease locally. The profile data was measured monthly for 15 months; it was a lot of material; if against the toe of the dune, it remained longer; locally, it helped that first winter and lead to a more healthy beach in spring and summer; not much benefit was observed after that.

On-Shore Placement Considerations
Dale Beasley, Columbia River Crab Fishermen's association, gave a presentation on the Benson Beach Placement from the CRCFA perspective. The PowerPoint Presentation can be viewed at:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/6-park-at-risk-the-fishing-perspective-of-benson-beach-on-shore-placement.pptx

Policy, Cost and Logistics Considerations

Jarod Norton, Corps, reviewed the policy, cost and logistical considerations associated with onshore placement at Benson Beach. Key points included:

- This is a funding issue. If we had funding, the Corps would love to do onshore placement at Benson Beach. The LCSG needs to organize to go to Washington DC to secure needed funding.
- The North Head Site box could be redrawn to target the best benefit to the beach and the park.
- There may be federal mechanisms to provide for funding that are worth investigating but obtaining funding will be difficult.
- While direct beach placement yields the best benefit, it needs to be undertaken in conjunction with nearshore disposal.
- Are there other creative ideas that we have not considered?
- Sand fences are something to consider if there is onshore disposal.
- Pump ashore is needed to restore what was lost this year. The Corps is happy to do this; it is just a matter of funding.
- The Corps is reconstructing 200 feet of the north jetty seaward; the jetty has retreated back 1000 feet. This could help redirect sand to the Benson Beach area.

Discussion

Brian noted that what we were talking about is mobilization costs for onshore placement. The prior onshore placement cost over $1.5 million to get the pipe set up to ready to pump. Then getting the sand, hooking the dredge up to the pipe without running into the jetty, and pumping it on had to be arranged. It was a difficult job and took about 6 weeks to place 300-400k cubic yards. He asked if that is the only way to do it or if there are any other options to getting sand on the beach.

Jarod said another option is basically a sump operation where you use a hydrolytic pump and piece of equipment that sucks up the sand and puts it on the jetty. He doesn't think realistically the material would last long on the jetty. Rod said it's not feasible based on exposure and proximity to the jetty, among other considerations. Captain Ackerman said there may be options pumping ashore but not over the jetty. Jarod agreed and said there could be new efficiencies in the last 8 years or something really cool that they don't even know about yet. Pump ashore with a hopper seems to be the best bet at this time.

Brian said while we could look at other parts of country where it's done more commonly, our conditions are different. Jarod agreed and said West Coast dredging is unlike that anywhere else. Florida dredges to have beaches. The East Coast doesn't have the environment that we have here. We have a wave climate in which we can only dredge mid-June to mid-September. Typically, we have two hopper dredges working out there. Nearshore placement is much faster as well.

Captain Ackerman agreed with Jarod. He said pump ashore on the East Coast and Gulf Coast is done to protect to towns and housing areas from hurricanes that could come through and erode the beach. Here each winter we will get two or three storms that could be considered hurricanes if they were moved 1000 miles south. East / Gulf Coast gets them rarely so they're able to build up these beaches better. As a dredger, he would love to be able to pump ashore. He said there are ways but it's expensive. It's a dynamic business and there are ways to do it efficiently but the cost is prohibitive.

Curtis said we should consider environmental change, i.e. sea level rise will continue to happen. We have the opportunity now to look at infrastructure to build into the jetties themselves to help mitigate this problem that will continue into the future. Over the decades, does it actually cost more?

Rod said the federal funding priority relates to what is being protected, i.e. lives or recreational facilities.

Rod said we have to come up with sustainable solutions and that it's good to set boundaries for our solutions. He said in terms of retreat vs. do something, maybe there is a middle ground in moving towards a sustainable level of placement and then periodically adding more.

Jarod said he would love to do all the projects but agrees that we have to set expectations. He said pump ashore may not be funded annually but we need to look at what we can do to protect the material when we do get to do pump ashore to make it stay in the system better.

Referring to George's presentation slide on the Canby situation, Rod said a negative recession rate means loss and we're losing more at a faster rate. He said the black line is what we've been placing at the Shallow Water Site (SWS) and the long-term rate of SWS use is related to the recession rate at Canby. If that black line was trending the other way or staying in the middle, maybe erosion at Canby would still be occurring but not as dramatically.

Brian said the SWS is a long-term near shore disposal site at the end of the jetty. Rod said we've worked really hard to gain the trust of fisherman and navigators; we don't want to turn the tide on that. What we're seeing is that we're over erring on the side of risk reduction at SWS. We could be placing ½ million to 1 million more at that site and still be safe. It won't solve the problem entirely but it will reduce the rate of reduction.

Steve Greenwood said the Regional Sediment Management Plan indicates that we will pursue and develop not one but four different disposal sites, two of which are onshore placement. Everybody agreed this is what we want to do to give us the maximum flexibility. At some point, we have to deal with the onshore placement issue head on. When we started in the Soth Jetty Site we did not know whether this thin layer disposal was going to work. There was no plan when we started out. It was because people were willing to work together that we figured out a way to make that happen. Monitoring and thin layer disposal where not givens when we

started. Steve suggested the group consider having this same kind of focused technical group and that it not be burdened on one agency to figure this out but instead a collaborative effort. How can you do it technically, sustainability, economically and where can you get the money? He said the group might be surprised at the answers.

Dale suggested building a couple piers for the dredge to hook up to for onshore disposal that are permanent. He said it could also produce money when the dredges are not using it. Generating money all winter might not make enough to pay for the dredge but could pay for the state's portion of it.

Jim said Steve has hit on a good approach and that we need to define the questions and considerations that we would like this group to address. Cost considerations always come up as a challenge. Jim asked if Rod could identify the criteria that the Corps uses to seek funding. Maybe this isn't a Benson Beach project but it's a Washington coast project. Jim said we need to look at the scope. It could be beneficial to look at incremental costs and how would costs for permanent pump ashore compare to the annual cost of transporting materials to the Deep Water Site or other sites. Jarod agrees that it is a good idea to pull folks together to brainstorm.

Rod we need to be better about capturing the benefits. We're good at calculating the costs, but the benefits are falling off the table. It can pay for itself if we capture the benefits. Brian said we need capacity. It's going to take some concerted effort to drive this forward above and beyond the capacity of this group. Nearshore disposal work so far has been more of a science question vs. policy question. We've been able to fund that. We need someone to shepherd this along with this group but behind the scenes.

Jarod said we have these science policy workshops but maybe there is some policy that needs to be changed that makes onshore placement a policy that have we have to adhere to. Jim said twice in the past (2007 and 2009) we have secured funds targeted towards technical policy topics. We spent $350k and $150k, respectively.

Dale said that one time we got $1 million for the Corps budget. We did four things but some of the money was moved up river for another project. Perhaps one option is increasing the Corps budget to fund this. Jarod said his budget for 2021 is due today so it would be two years out for funding if submitted today. The CrudUp study was funded through this group; maybe it looks something like that. Curtis said the states put that study together. He said that mechanism might work for something like this too. Brian suggested a policy fellow as another option.

Jim said the initial step is a conversation with the technical team on the mechanics and setting parameters. We need to develop some questions that need to be answered and then bring them back to the larger group.

MCR MOVING FORWARD REPORT AND RECOMMENDATIONS

Jim Owens reviewed his presentation on Moving Forward on Mouth of The Columbia River Beneficial Use Project - Assessment Synopsis And Recommendations. The PowerPoint Presentation can be viewed here:

https://lowercolumbiasolutionsdotorg1.files.wordpress.com/2019/01/7-lcsg-moving-forward-assessment.ppt

He also provided a handout (attached) outlining his recommendations based on interviews with LCSG members.

Discussion

Brian said the management and funding of LCSG has evolved in the 16 years since it was first convened. He said we have been working with the National Policy Consensus Center over this time as the contractor for neutral facilitation and coordination. We are now proposing a significant departure.

Steve said that this group has done some amazing things. These conversations were not possible 10-12 years ago. He congratulated the group for its effort. He then said that because NPCC is at Portland State University, there is a fairly large overhead that NPCC has to charge LCSG for their services. The extra overhead was worth it as a neutral convening authority to get all of you to begin having those conversations. Based on the last few years and the nature of the conversation today, he is not sure that the neutral aspect that they bring is as important anymore. You are able to have the conversations without the role that we played for so long. Steve said he sees this as a graduation party and that the LCSG is moving to the next stage. He is very supportive of the recommendation and would encourage the group to make this transition sooner than later. By sharing in the costs, everyone benefits.

Cooperative Agreement Approach

- Brian reviewed the recommendation and handout for a Cooperative Agreement through WDOE.
- The advantage of this is that WDOE does not have to charge an overhead rate and every dollar that comes in goes into funding the work.
- The approach is pretty basic – the group develops a scope of work for the services that we are trying to fund for the coming year, it has standard terms of agreements and then there's a signature process.
- When adequate money is collected, WDOE will go out to bid for a contractor who will handle the management of this group.
- As Jim noted, we would ask the contractor to work with us to develop the scope for the next year.
- The disadvantage of dues is that we don't want to exclude organizations that cannot afford dues. The most important thing is that you all are here. We know everyone cannot afford to contribute. We know that you will have different mechanisms for getting approval for funding.

- WDOE does not care how we go about it. When the money comes in, we put it in an account for this project only.
- Hopefully, we could just send an invoice "to carry out the work that is defined in the collaborative agreement".
- We want to make sure this is a good path forward and that there's not some fatal flaw that would prevent your organization from participating in this.
- Ideally, we would find out who can contribute what.
- WDOE will be the fiscal agent but we will be hiring a contractor to play that third party role that your organizations value. Jim has brought a significant amount of experience and made us better than we would have been on our own.

Brian asked participants if there are any concerns with taking this approach.

Captain Ackerman said he's fairly new to this but wonders if any group will have issues funding this because of it being a Washington agency. He asked if Oregon needs to be portrayed as having a bigger role in the agreement. Brian said WDOE is just the fiscal agent, but it might be good to reflect that Washington is acting along with its co-convener, the State of Oregon. Matt who is attending the meeting for Patty Snow, said they are on board with this and comfortable with the arrangement. Scott said ODFW is on board and supports this idea as a way to stabilize the funding arrangement.

Dale said that Jim's role as facilitator has been critical and he has concerns that the new facilitator could be a fatal flaw. The role is extremely important and he would like the bid to go to the individual not the lowest bid. Brian said this is a great point and he would like to involve a team of people from LCSG to help get the contractor role filled appropriately.

Scott asked if the Cooperative Agreement will be one agreement for the all participants or one agreement per participating organization. Brian said ideally it would be one agreement for everyone. Bridgette said she doesn't know that we will all be able to agree on one document. She said the Corps and EPA have been trying to get an interagency agreement for 1.5 years. For EPA to be able to participate, we will need specific tasks. The timing of when we receive our funds will help decide when / what we can contribute and will vary year to year. Brian said he's happy to do a conference call or whatever it takes to get EPA attorneys on board.

Scott asked if Brian imagines the timeline being that it's all or nothing in terms of funding or if some can come in with funding and approval to the agreement at different times. Brian said we don't want to hold things up, so we may need to modify that approach. Jim said that if the LCSG only raises 50% of the money for the first year, then you could create a modified contract based on available funding.

Matt said Patty gave her proxy that the Oregon Coastal Management Program can contribute $5,000. Brian said WDOE has committed to contributing $5,000-6,000 this year. He said he and Patty will be making calls soon to ask how much each organization can contribute and asking for guidance on the scope of work to go into the agreement. He said we will need to figure out

what happens between January and June. The Port of Portland contributed some funds here recently. We will want to schedule a spring workshop so that we don't lose momentum.

BREAK OUT SESSION: CASE STATEMENT

Jim said that, while an excellent video has been produced by NPCC on the group's successful collaboration process, we don't have a case statement about its accomplishments on projects to share with the public, legislature, other agencies, etc. Participants were divided into three groups to discuss ideas for creating a case statement that can be shared with public, legislators, other agencies, funding sources, etc.

Report back

Group #1: Matt Spangler, group leader

Content:

- Overall accomplishment: successfully implementing beneficial use of dredged material from the mouth of the Columbia River (define and itemize "beneficial use").
- Forged strong, enabling partnerships between federal, state, local, private and academic agencies and organizations
- Collaborative governance structure
- Produced state of the art science
- Applied research
- Beneficial use accomplished through incremental progress and adaptive management

Audiences:

- Congressional delegation staff
- Local port authorities on the LCR
- Local governments (cities and counties)
- Maritime commerce stakeholders such as the Colombia River Steamship Operators and the Portland Merchant Exchange
- General public

Methods:

- Reports/articles suitable for publication in public policy journals or similar professional publications
- Story map that could be presented to groups, local governments and other organizations in the region
- Story board or similar interpretative media suitable for display at public venues such as the CRMM, Cape Disappointment State Park or similar

Group #2: Jim Owens, group leader

Key Accomplishments:

- NOAA's work on crabs/demonstration of no significant adverse effects
- Successful placement at the South Jetty Site; now transferring what's been learned to the North Head Site

- Corp has proven its ability to successfully place materials in challenging nearshore environments
- Bringing together of disparate parties with multiple interests for a common purpose
- Successfully working together/breaking down institutional barriers
- Group's longevity speaks to its effectiveness
- Dual benefits of keeping the MCR dredged while using the dredging materials for beneficial purposes

Messages:

- For a public message, keep simple and pointed: crabs, clams, camping, Columbia
- What navigation channel means to region/ensuring commerce
- Columbia River is the source of sediments for 100 miles north and south; sustains beaches and communities
- Use of sand for beneficial purposes; attempting to avoid huge costs associated with jetty failure, loss of beaches
- Mitigating for dams upriver
- Providing opportunities for public recreation
- Two states working together to address regional issues; collaboration theme
- For media, need to have catchy story

Tools:

- Videos, i.e. Curtis' campods
- Storytelling
- Social media – critical to expand the audience
- Visits to ports; legislative/Congressional staff
- Site visits

Audiences to Add:

- NGOs, i.e. Surfrider
- State Parks association
- Audubon Society
- Watershed councils (OR)
- BPA -- responsibility for challenges that dams impose

Miscellaneous:

- Science is alleviating permitting agency fears
- LCSG label does not fit the work; everything is MCR focused
- On the website, include member names and logos

Group #3: Brian Lynn, group leader

The group focused mostly on the key accomplishments/value of LCSG that should be emphasized in messaging/communications.

1. The work of the LCSG on sand management at the MCR is cost-effective
    - Less expensive to dispose of material in nearshore than in deepwater site.
    - Keeping sand onshore or in the nearshore protects reduces erosion, protects infrastructure (roads, jetties, etc.), maintains beaches for recreation, etc.

- Creates a forum for collaboration; working together up front results in less antagonism (including legal challenges) and leads to more positive, timely outcomes.
    - (LCSG structure allows things to happen at a faster pace (e.g. permitting) and can lead to more creative solutions)

2. Inclusiveness and broad representation of the LCSG can benefit many interests.
    - Collaboration addresses shared interests of participants re beneficial use of sand
    - LCSG can advocate for partner interests (e.g. ports)
    - LCSG can serve as a model for other parts of the Washington coast (or west coast)
3. LCSG efforts have led to more investments in physical and biological science that informs policies/actions.

Comments

George added that in addition to the three C's that Jim mentioned, it could be the five C's by including Columbia and communities. He said the Columbia is the source of sediment for 100 miles of coastline both north and south of its mouth. We need to manage it. It's the source for the beaches. We want to sustain those communities and the resources as well as we can going forward.

MEETING SUMMARY AND CLOSING

Jim and Brian recapped the main points from the meeting.

Preliminary Results from 2018 Field Season / Recommendations for 2019 Field Season

- The panel briefed the group on what happened this current year and talked about what they propose for the coming year.
- At the North Head Site, the group is in agreement:
    - Proceed with the second stage of the pilot project in the phase two area with a change in orientation to be parallel to the beach.
    - The goal is to demonstrate that the Phase 2 area is a dispersive site, while understanding where the sand is dispersed.
    - Use the sediment transport model, modified to reflect different current regimes, as a surrogate for the tracer study unless funding can be obtained for such.
    - Determine the placement volume so that there is not a feature any greater than two feet
    - Task the technical team with developing the details of a phase two pilot project for sharing with the larger group.
- At the South Jetty Site, the group is in agreement that:
    - It has been demonstrated to general satisfaction that there are no adverse effects on crabs but benthic and infauna studies are still needed.
    - Task the technical team with developing a plan for these additional studies.

Benson Beach Panel Discussion

- Group agreed to have the technical team develop recommendations on issues and options to further explore for onshore placement.
- The co-conveners will investigate options for adding capacity to investigate onshore placement issues and options.
- LCSG is committed to further investigate this topic.

Moving Forward

- Anyone with comments or questions on the draft agreement should contact Brian him.
- Patty and Brian will follow up with LCSG members and other potential funders on funding commitments and on any issues associated with signing onto the Cooperative Agreement.
- The co-conveners will work with Jim on a near-term funding strategy.

Brian thanked participants for their willingness to help move the group forward into the future.

Meeting adjourned at 3:40 pm.

ATTACHMENT

11/8/18

TO: **Lower Columbia Solutions Group**
FROM: **Jim Owens, Facilitator**
RE: **PROGRAM RECOMMENDATIONS**
ASSESSMENT: MOVING FORWARD ON MOUTH OF COLUMBIA RIVER BENEFICIAL USE PROJECT

In response to direction received at the May 2018 Science-Policy Workshop and in consultation with the Lower Columbia Solutions Group (LCSG) co-conveners, the following Assessment has been prepared on how to move forward on the Mouth of Columbia River (MCR) Beneficial Use Project. This Assessment is based on input from interviews with a number of key LCSG stakeholders combined with personal observations as the LCSG's facilitator for a number of years. The focus of both the interviews and the recommendations provided is on the types of services desired/needed for the LCSG, how best to obtain these services, their cost, and how to fund them.

A summary table of Program Recommendations is followed by a synopsis of interviews and a recommended work scope and budget for 2019.

A. PROGRAM RECOMMENDATIONS

	Recommendation
Management/Coordination of LCSG Services	Continue to contact with a neutral consultant for general project management for the MCR Beneficial Use Project, management and technical team coordination and facilitation, workshop organizing and facilitation, and general LCSG assistance. Overall management direction should continue to be provided by the two states' coastal management agencies, with some additional management functions handled by WDOE, e.g. web site, mailing list.
Services to be Contracted	Primary Services as defined below under Recommended Scope of Contracted Services. If additional funding can be secured, current services should be expanded to increase the program's visibility through (in order of

	priority): (1) a program of periodic briefings to Congressional and state legislative staffs; (2) outreach to ports and parties who would be potential members; and (3) media outreach.
Cost of Contracted Services	$25,850 for Primary Services (as defined below) for a period of 12 months. $48,950 for Primary and Secondary Services (as defined below) for a period of 12 months.
Funding Solicitation and Contracting Mechanism	A transition in fiscal agent and consultant contract manager services from the National Policy Consensus Center (NPCC) to Washington Department of Ecology (WDOE) is recommended. The arrangement with NPCC would be replaced by Cooperative (interagency) Agreements between WDOE and LCSG members whereby LCSG members agree to fund contracted services, with WDOE serving as fiscal agent and consultant contract manager. The Cooperative Agreements would be renewed annually or executed for multiple years. WDOE would need to determine its administrative fee, if any, for administering the Cooperative Agreements. Through the Cooperative Agreements, LCSG members would be invoiced for project management, coordination and facilitation services for LCSG. Conference sponsorships rather than dues would seem to be easier to implement among the various types of LCSG members. The Agreements would focus on annual Science-Policy conference sponsorship while being framed broadly enough to include not only annual conference organization and facilitation but general project management/coordination, staffing of the management and technical teams, and other support services.
Levels of Contributions to Solicit	To support the recommended Primary Services, at least $30,000 will need to be solicited to account for the inability of some LCSG members to contribute or the ability to contribute at lower than assumed levels, as well as timing limitations associated with budget cycles. Contributions ranging from $500 to $6,000 should be solicited. Among the parties to be solicited: Corps of Engineers, EPA, OR Coastal Program, ODFW, WDOE, WDFW, Washington State Parks, Pacific County, Clatsop County, CRCFA, Port of PDX, Port of Ilwaco, Port of Astoria, Columbia River Pilots, CREST, NOAA, USGS.

	Discussion is needed on the appropriate party to make the solicitation queries.
Contracting Mechanism Options	The current consultant contract expires 12/31/18 and funding has not been secured to extend that contract. To avoid losing continuity in the MCR Beneficial Use Program, ideally the transition from NPCC to WDOE can be implemented by the end of the first Quarter 2019. This will require executing Cooperative Agreements, securing adequate funding to engage a consultant, and contracting for consulting services. If additional time is required for a full transition, LCSG should consider continuing to obtain contract services through NPCC until a set time in the future, e.g. 7/1/19 or 12/31/19. The nature of services will be dictated by the amount of money that can be secured by 3/31/19. If the WDOE-proposed Cooperative Agreement program is not supported by LCSG members or is determined to be functionally infeasible, LCSG should continue to obtain contract services through NPCC through December 2019 while pursuing a contracting arrangement with CREST or a similar 501(c))3 organization that is initiated in January 2020 (or sooner if possible).

B. ASSESSMENT SYNOPSIS

Management/Coordination of LCSG Services

The general feeling among parties interviewed is that current support services are adequate but that, with additional funding, the program could be better promoted, Congressional and legislative staff regularly briefed, and more between-meeting coordination could occur. There are also suggestions for engaging additional parties, especially ports. Conversely, several interviewees feel that annual convenings suffice as a level of effort.

For most interviewees, having an agency assume responsibility for management and coordination raises concerns about capacity, priorities, and ability to manage other agencies. A common concern is the perception of an agency having an inherent bias. For these parties, continuing to rely on contracted services makes the most sense. Other suggestions include one

or more state agencies assuming more management functions or a joint Corps-states management team.

Interviewees generally agree that it is important to continue to have neutral facilitation, especially with two states and diverse interests involved. Without it, the continued participation of some groups could be in doubt. A minority view is that perhaps the program has reached the point where perhaps it can continue to move forward without a neutral facilitator.

Funding of Services

All parties interviewed desire to move away from ad-hoc funding, which is perceived to be challenging and unsustainable. Several parties suggest that the Corps and the states' coastal zone management agencies should be primary contributors.

Interviewees are divided over conference registration/sponsorships versus membership dues as a preferred option to the current funding approach. Some parties feel that conference sponsorships would be relatively easy to administer and to contribute to. Others suggest that membership dues would be a better funding source, assuming there are tiered levels of membership. Federal partners strongly prefer a sponsorship approach. A phased approach is also suggested, starting with conference sponsorships in the short term, then transitioning to a dues program.

Additional funding options identified include having the two states specifically budget for LCSG support, recognizing that General Fund support may be challenging. It is also suggested that LCSG support be budgeted as part of grants. Obtaining funding through grants and foundations is expected to be challenging, especially for ongoing services; funds are likely to be more available for specific projects or events.

Considerations include funding cycles, which can be unpredictable and vary among agencies, and having a specific scope of work to budget for. For federal agencies, moving funds to another federal agency is the easiest way to transfer monies.

Contracting for Services

In response to the question of options for contracting for and managing consultant services, interviewees support either continuing to contract through NPCC or through a new entity, such as a 501(c)3 organization. A variety of organizations are suggested, with CREST (which is not a 501(c)3), most frequently suggested. CREST indicated that it would be interested in serving as fiscal agent and contract manager. The South Pacific County Community Foundation is another suggestion for a local fiscal agent.

Late in the interview process, WDOE proposed the concept of it serving as fiscal agent/consultant contract manager through a Cooperative Agreement program that it indicates would be relatively easy to set up, would not require significant administrative time or overhead, and may offer a multi-year approach. It indicates that there is precedence within the agency in administering such inter-agency, inter-party agreements. Among the few interviewees queried about such a Cooperative Agreement program, it appears to be a feasible approach and potentially easier to administer than the NPCC contract, as well as it keeps the program more closely under LCSG control.

Addressing Cape Disappointment/Benson Beach Erosion

Interviewees generally believe that it is critical and timely to explore options for on-shore placement at Benson Beach to help address increasing erosion at Cape Disappointment State Park and to avoid future impacts to the North Jetty. It is suggested that coordination with other West Coast dredge operations may achieve efficiencies in dredge use and reduce costs. Several parties question why the Beneficial Use program hasn't moved to on-shore disposal when it was identified at least 6 years ago as the most beneficial use of dredged materials. Recognizing that the approved MCR Regional Sediment Management Plan identifies a program of both nearshore and on-shore disposal, several parties suggest that adequate discussion of how, rather than whether, on-shore disposal at Benson Beach can move forward be part of the upcoming LCSG workshop. Washington State Parks and Recreation should be actively engaged in the conversation and solicited for financial contributions.

C. RECOMMENDED SCOPE OF CONTRACTED SERVICES

PRIMARY SERVICES

Timeframe: 12 months

Task 1: Coordination with Conveners

Assist and advise Oregon and Washington project managers and other key participants as appropriate on project meetings, action items and other aspects of project management. Organize regular conferences (in-person meetings or teleconferences) for purposes of project check-in and identification of next steps. Prepare summaries of all meetings and teleconferences.

Budget: $5,600

Personnel Hours: 36 hrs. @ $150/hr. = $5,400

Expenses (telephone, internet, copies, other direct expenses): $200

Task 2: Facilitation of Management and Technical Teams

Organize and provide neutral facilitation of Technical and Management team meetings and conference calls to plan for 2019 beneficial use site disposal, monitoring and data analysis. Prepare and distribute summaries. Provide in-between meeting coordination with team members.

Budget: $5,000

Personnel Hours: 32 hrs. @ $150/hr. = $4,800

Expenses (telephone, internet, copies, other direct expenses): $200

Task 3: Organization of Science-Policy Workshop or Similar Forum

Consult with Management Team on and organize Science-Policy Workshop or other appropriate forum in Spring/Summer 2019 on status of disposal/data collection programs at South Jetty and North Head Sites, options for and feasibility of on-shore disposal, program for implementing adaptive management on an ongoing basis, and other topics. Prepare and distribute report on results.

Budget: $9,760

Personnel Hours: 36 hrs. @ $150/hr. = $5,400

Support services: 16 hrs. @ $85/hr. = $1,360

Expenses (room rental, refreshments/meals, lodging, mileage, other direct expenses): $3,000

Task 4: Program Information

Assist WDOE in updating and maintaining a project contact list. To help update the project website and bibliography of reports, assist WDOE in collecting historic paper and electronic files. Review the project web site, blog and other social media background information.

Budget: $1,220

Personnel Hours: 8 hrs. @150/hr. = $1,200

Expenses (telephone, internet, copies, other direct expenses): $20

Task 5: 2020 Work Scope

Prepare recommended 2020 consultant work scope and budget for Management Team review, based upon results of the 2019 LCSG program and direction on desired consultant services to be contracted and the approach to be employed for contracting.

Budget: $920

Personnel Hours: 6 hrs. @150/hr. = $900

Expenses (telephone, internet, copies, other direct expenses): $20

Task 6: Case Statement

In consultation with LCSG members, develop a cast statement(s) designed to increase the program's visibility and for briefings with Congressional and legislative offices, potential partners, and the media. Produce a visibly pleasing handout(s), web text and links, and other appropriate informational pieces. Secure assistance from an agency member(s) with graphics and reproduction.

Budget: $1,520

Personnel Hours: 10 hrs. @150/hr. = $1,500

Expenses (telephone, internet, copies, other direct expenses): $20

Task 7: Project Management/Coordination

Assist the Steering Committee, Management and Technical teams, LCSG and National Policy Consensus Center to organize additional meetings, prepare and present information, respond to inquiries, and other tasks needed to accomplish the objectives of the MCR program. Prepare monthly invoices and progress reports.

Budget: $1,830

Personnel Hours: 12 hrs. @150/hr. = $1,800

Expenses (telephone, internet, copies, other direct expenses): $30

Primary Services Total Budget: $25,850

Total Personnel Hours: $22,360

Total Expenses: $3,490

SECONDARY TASKS

Timeframe: 12 months

Task 8: Briefings of Congressional and Legislative Offices

In consultation with LCSG members, identify appropriate messages and "asks" of Congressional and Legislative leaders. Organize and participate in presentations on the LCSG program, its accomplishments, and current activities for Congressional and legislative offices in Oregon and Washington. Prepare summaries of all presentations.

For budget estimation purposes, 12 presentations are assumed; 6 in either Southwest WA or Olympia and 6 in Portland or Salem OR.

Budget: $12,400

Personnel Hours: 80 hrs. @150/hr. = $12,000

Expenses (mileage, telephone, internet, copies, other direct expenses): $400

Task 9: Outreach to PNWPA, Individual Ports and Other Potential Partners

Organize and participate in presentations on the LCSG program, its accomplishments, and current activities with Pacific Northwest Ports Association, select Lower Columbia River ports, and other associations and potential partners identified by LCSG. Prepare summaries of all presentations.

For budget estimation purposes, 6 presentations are assumed.

Budget: $5,050

Personnel Hours: 32 hrs. @150/hr. = $4,800

Expenses (mileage, telephone, internet, copies, other direct expenses): $250

Task 10: Outreach to Media

Organize and participate in presentations on the LCSG program, its accomplishments, and current activities with key media outlets in SW Washington and NW Oregon. Prepare summaries of all presentations.

For budget estimation purposes, 6 presentations are assumed.

Budget: $4,725

Personnel Hours: 30 hrs. @150/hr. = $4,500

Expenses (mileage, telephone, internet, copies, other direct expenses): $225

Task 11: Update of RSMP

Update 2011 MCR Regional Sediment Management Plan to reflect decision-making since its approval on disposal methods, volumes of material to be deposited, details on beneficial site locations, permitting, and other aspects of the program.

Budget: $925

Personnel Hours: 6 hrs. @150/hr. = $900

Expenses (mileage, telephone, internet, copies, other direct expenses): $25

Secondary Services Total Budget: $23,100

Total Personnel Hours: $22,200

Total Expenses: $900

Combined Primary and Secondary Services Total Budget: $48,950

Total Personnel Hours: $44,560

Total Expenses: $4,390