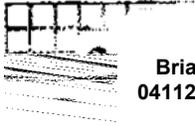


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Subject: GRAIN SIZE ISSUE info

Laura and Sharon:

1. You wanted a few quick bullets - but you're getting a thesis!
2. You also wanted this by COB today - obviously you meant "my" COB!
3. Yes, we would appreciate the opportunity to review the draft headquarters responses to Santa Cruz and Crescent City, as well as to receive a copy of the final responses.

#### BEACH NOURISHMENT AND GRAIN SIZE

This is to help you prepare replies to Santa Cruz Harbor (Brian Foss) and Crescent City (Lindsay Marks) on the issue they raised during the recent CMANC tour about EPA being flexible regarding sediment grain sizes that *may be* appropriate for beach *nourishment*. At the end I also summarize Region 9's regulatory position on the issue in general.

As you consider the following comments, please keep this overall context or perspective in mind: The specific projects being discussed - Santa Cruz and Crescent City - are very different from each other and are not parallel examples of any pervasive policy problem regarding grain size and beach nourishment. When the specifics are included, we reach very different conclusions about what may be appropriate in each case. EPA should think carefully before developing any new general policy (that could have nationwide implication) from difficulties that are perceived in these specific instances. Finally, as you know, the "80 percent sand" figure is based in part on a consensus view among the EPA Regions of what constitutes "predominantly" sand, for the purpose of applying the testing exclusion criteria of the ocean dumping regulations at section 227.13(b)(1). Testing exclusion criteria are a distinct issue from whether high-fines sediments should be placed on a beach at all. Neither Santa Cruz nor Crescent City have raised a testing issue, and I am not addressing that aspect of the matter here.

#### Regarding Santa Cruz

Mr. Foss's letter of March 27 describes Santa Cruz Harbor's proposed approach for developing site-specific information that could be used as a basis for documenting whether a higher percentage of fines may be discharged for beach nourishment without significant adverse impact to the marine environment. In fact, we have been working closely with Santa Cruz Harbor on a specific pilot project, following the approach Mr. Foss describes. We also support the general approach he advances as a reasonable conceptual framework for other dredging applicants who

would like to re-use dredged material for beach nourishment, but whose sediments fall outside the grain size "rule of thumb."

As you know, 90 percent sand is the typical cut-off applied around the country (and certainly in coastal California, whose exposed beaches are generally comprised of 95+ percent sand) *in the absence of site-specific* information about potential impacts of *the* fine fraction. In particular, to approve a more substantial percentage of fines for beach nourishment purposes, we need to know:

the degree of contamination carried by the fine fraction, as distinct from the bulk sediment chemistry (since the majority of contaminants are typically associated with the fine fraction); the specific deposition area(s) for the fines "winnowed out" from sediments placed on or near the particular beach;

the natural resources that may be exposed or affected at the deposition site(s) or during transport to *the* site(s) (for example, **will** the fines affect seagrass or kelp beds via reduced light penetration, **will** they smother hard-bottom or reef habitats even temporarily, etc.); the degree to which human uses may be affected (will turbidity, odors, etc., degrade the beach? and for how long?); and

whether there is a legitimate need for beach nourishment - i.e., whether placement of even a **high** percentage of sand would be a "beneficial use" at the location proposed, or whether another alternative may be the "LEDPA" for disposal of dredged material (in California it is usually, but not always, beneficial to re-use dredged sand to nourish beaches).

Once this information has been addressed on a site-specific basis, EPA and the Corps can decide whether a relatively higher percentage of fines can be approved for beach nourishment. And then, if it is approved, some form of monitoring may be needed in some cases. Santa Cruz Harbor's proposal addresses all these needs. And in their case, follow-up monitoring is proposed (they know they are **operating** in a National Marine Sanctuary, and they have heard concerns from surfers, beach users, and local residents about past beach disposal operations even when the sediment met the grain size "rule of thumb").

For all these reasons, a generally positive EPA headquarters response to Mr. Foss's letter is appropriate. It should agree that he is pursuing an appropriate evaluation framework (without, of course, implying that either a positive or negative decision on beach nourishment will result from the evaluation), and should express EPA's interest in and commitment to continuing to work **with** him on the project.

### Regarding Crescent City

The Crescent City **situation, however,** stands **in sharp** contrast to Santa Cruz. **We** have not seen the letter that Ms Marks has apparently written to Craig Vogt *on this* matter (can you fax us a copy?); but here is the situation at this time from our standpoint. (By the way, the SF COE has also **received** communication from Ms Marks about the grain size issue, and they are in the process of generating a **response**. I therefore am sending a copy of this message to my counterpart at the District.)

First, Crescent City has NOT proposed (to us or the COE) any site-specific evaluation to determine whether fines discharges on/near their beaches may result in adverse environmental effect. None of the information needs in the bullets given above are proposed to be studied, and existing information that we are aware of is inadequate to address them.

Second, we do not necessarily agree yet that the basic purpose of Crescent City's proposal is in fact beach nourishment, as opposed to simply "dredged material disposal" (see comment on "basic project purpose" under the following heading). In the present case, three of the four areas Crescent City wants to dredge are high in fines (reportedly only 51.7-56.6 percent sand and, interestingly, a "wood" percentage ranging from 1.7 to 17.3 percent), while the beach and nearshore receiving areas range from 97.3 to 99.2 percent sand. Be *aware that* Crescent City and the COE's own dredging *project* managers recently pushed to use the old "defunct" Crescent City Interim ODMDS for this and other current dredging projects. Inexpensive disposal has clearly been their primary focus for some time. In fact, over just the last year or so Region 9 helped to convince the local and state agencies that ANY beach nourishment (even of pure sand) was acceptable in this area. Last year's dredging was the first time the resource agencies had allowed beach disposal at Crescent City in many years (they had long-standing concerns about clam beds and human use of them, as I recall).

Third, to the extent that "disposal" is the primary purpose, we believe there is a less damaging practicable alternative available. Specifically, although there is no longer a nearby Region 9 ocean disposal site (the closest is now HOODS, 80+ miles away), there is a Region 10 disposal site just over the Oregon border to the north, approximately 8 miles away. To our knowledge, neither the SF District COE nor Crescent City has seriously pursued coordination with Region 10 and the State of Oregon regarding approval to use this site.

Overall, it appears to us that Crescent City is mainly trying to take advantage of the timing and generally positive atmosphere of the CMANC visit to get approval of their project without having to go through the same hoops as other harbors. Region 9 would certainly object to issuance of a permit allowing Crescent City to discharge a high proportion of fines for "beach nourishment" unless and until an adequate site-specific evaluation had been performed, and availability of the nearby ocean disposal site had been seriously pursued.

So, we recommend that an EPA headquarters response to Crescent City do two things: First, it should reflect EPA's general agreement that flexibility *can* be applied to grain size considerations for beach nourishment projects, and that the information needed to support that consideration is the kind of site-specific information being generated by Santa Cruz Harbor. Second, still in a positive tone, it should point out that Crescent City has not developed this kind of data, but that EPA (and I believe the COE as well) stands ready to work closely with them should they decide to do so.

### Some Regulatory Considerations

*What we really do.*

Aside from the "80 percent rule of thumb" we all use absent better information, the ocean dumping regulations at section 227.13(B)(2) require that the particle size of beach nourishment material be "compatible with material on the receiving beaches." The Inland Testing Manual also emphasizes physical compatibility for beach nourishment. This has always been the actual basis of our regulatory decisions, and to support it we and the COE typically require applicants to provide grain size analyses of the proposed receiving beach (usually a lower intertidal and a shallow subtidal sample, in order to establish a grain size "envelope" for the beach). We then apply reasonable *judgment, specifically* considering alternatives, absolute project size (volume), and potentially affected resources in making a final decision. Rest assured we are as flexible as we feel we can be on a case-by-case basis - we WANT beneficial re-use! - and I can cite multiple examples where less than 80 percent sand was permitted for *beach* disposal even on open-coast California beaches.

#### *Basic Project Purpose.*

In Region 9, we define dredged material placed on or near beaches as "fill" when we agree the basic project purpose is beach nourishment. This allows us to regulate the project under the CWA, and not under MPRSA (which would require a full-blown ocean disposal site designation process for every receiving beach!). In our view, we cannot reasonably define dredged material as "fill" in order to use this approach if there is: (A) no "need" for, or there would be adverse *impacts* from, beach nourishment in the area; or (B) if "most" of the material being discharged clearly will not serve the purpose. In other words, if a sediment has less than 50 percent sand, then by definition the majority of it will not act as fill and the predominant result of the placing it on or near a beach will not be to nourish the beach. Rather, "most" of the discharge is being "disposed" and, if outside the baseline, would generally be regulated under the MPRSA. Therefore 51 percent may be a lower limit on the sand percentage that we could even consider; but how to decide when some percentage between 51 and 80 is acceptable?

The only possible answer: apply the 404(6)(1) Guidelines! When there is a critical enough need for beach nourishment material (such as a severely eroding beach that places life and property at substantial risk - and we certainly have such situations in coastal California), such that we want to get the benefit of any (even fairly small) percentage of sand that we can, and we choose to regulate it under the CWA, the 404(6)(1) Guidelines are clear about the kinds of factual determinations we need to make regarding the effects of the discharge (including the fine *...* fraction), and the kinds of information we must have to make them. Again, the Santa Cruz proposal attempts to generate appropriate information for this kind of analysis, but Crescent City has made no such proposal.

#### *Practicable Alternatives.*

We generally consider beach nourishment, where there is a need, to be beneficial *and a preferred alternative, when* the dredged material itself is reasonably compatible with the receiving beach. But when a high proportion of fines is present and we aren't sure what's in them chemically or where they're going to end up, we can no longer rely on any degree of "presumption" that the discharge will have no significant adverse impacts. The 404(6)(1) Guidelines then require considering whether there may be a less environmentally damaging practicable alternative ("LEDPA"). This applies to beach nourishment just as it would for any other discharge of fill

material into waters of the U.S., even if we agree that the "basic project purpose" is beach nourishment. In the Crescent City case, absent other information we must presume there could be adverse impacts; and at the same time we can presume that discharge at the existing nearby disposal *site could be* less damaging (we certainly would presume it to be "practicable" until convinced otherwise). In contrast, Santa Cruz is developing the information to allow us actually do the 404(b)(1) evaluation, so that we need not rely on environmentally conservative presumptions at all. The point is that the driving issue in the case of Crescent City is NOT simply any policy regarding grain size. Rather it is the Guidelines' requirement that alternatives be evaluated. And the problem for Crescent City is that based on the available information we cannot conclude that beach nourishment of fine sediment is the LEDPA.

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