From: **Richard Hilderman** <richardhilderman@gmail.com>
Date: Mon, Aug 29, 2016 at 9:51 AM
Subject: Re: Presentation Review
To: Andy Coburn <acoburn@email.wcu.edu>

Andy,

Thank you for your rapid critique. We sincerely appreciate it.

Richard

On Mon, Aug 29, 2016 at 9:16 AM, Andy Coburn <acoburn@email.wcu.edu> wrote:

> Hi Richard,
>
> Rob asked me (and Katie Peek, PSDS Research Scientist) to review the PowerPoint presentation entitled "2016 Shoreline Management & Dredging Project." Here are our comments:
>
> An issue of primary importance not discussed in this presentation is the entity that has applied to do all this dredging. Without this information, it is difficult to fully ascertain the direct, secondary and long-term cumulative impacts of the proposed actions. However, generally speaking, the negative environmental impacts of dredging a natural (previously undredged) channel are usually more significant – in terms of degree, extent and intensity - than those resulting from maintenance dredging (although maintenance dredging can result in significant negative environmental impacts, as well). Therefore, we agree with the

contention that it is reasonable to support (not vigorously challenge) ongoing maintenance dredging of previously dredged channels (assuming best management practices and all permits are obtained), but advise against dredging previously undredged channels – such as N. Jinks Creek - due to the potential for significant environmental impacts; even in consideration of the limited *economic/recreational benefits that might result.*

Regarding Jinks Creek: We concur with the statement that the North End and South End have different dynamics and should be viewed as discrete dredging *areas/projects, although the position that it is reasonable to consider the South* End of Jinks Creek for dredging is not supported by any data/evidence. We assume this position is based on the fact that south Jinks Creek is heavily influenced by Tubbs Inlet and that, as a result, it is highly dynamic and less susceptible to the impacts of dredging. While this may, in fact, be the case, it is important to understand that the removal of sediment from any marine ecosystem will result in some kind of impact. It is also unclear whether the southern end of Jinks Creek has been previously dredged. If it has, we agree that it is reasonable to consider the South End of Jinks Creek for dredging. If not, the degree and extent of initial dredging, along with the potential demand (need) for future maintenance dredging, must be considered when deciding whether to artificially – and permanently - alter this location.

In terms of dredging the north end of Jinks Creek, it will almost certainly have a negative impact on estuarine resources and habitats. For example, sedimentation issues associated with the actual dredging process may impact shellfish resources and SAV, while the secondary and long-term cumulative impacts on intertidal ecosystems resulting from an increase in the number, size and speed of boats utilizing this area must also be assessed, estimated and compared to the potential benefits that might result from dredging a natural estuarine tidal channel. In addition, there is also concern about the potential for estuarine tidal channel sloughing and increased sedimentation resulting from a dramatic change in tidal flow/velocity. Based on what is presented in the PowerPoint Presentation, we agree that there are a number of valid concerns associated with dredging the north end of Jinks Creek, and believe the economic/recreational benefits of so doing will not justify the potential risk of environmental degradation. If dredging in the north end is seriously considered, however, considerations such as timing and impacts MUST be explored.

In terms of dredge spoil quality, the potential for sediment contamination in this location appears minimal, and sediment sampling/testing will almost certainly be required as a permit condition. As for the emplacement of dredge spoil, this will be based on sediment size, composition and quality. While south end sediment

may be beach compatible, sediment in the north end is most likely too fine for subaerial placement.

On the 24th slide entitled "**Shoreline Management Proposal: Sediment removal may also improve tidal flushing and help improve nursery habitats within the tributary systems:**" it is assumed that dredging will improve the environment by increasing tidal flushing. We are unaware of any evidence to support this assumption. Although changes in water quality that *might be considered an "improvement" can result in locations where flow had* previously been restricted (such as at a new inlet, like the one at Fire Island, NY, where the interaction between sound/bay and ocean was very low), this is not the case here where a connection between channel, ocean and ICW currently exists. Deepening a natural channel by several feet, as proposed, will likely not result in any habitat benefits/improvements.

In summary, we agree with the conclusions presented on slide 25.

Thank you for the opportunity to review and comment.

Sincerely,

Andy Coburn

Research & Graduate Faculty

Associate Director, Program for the Study of Developed Shorelines

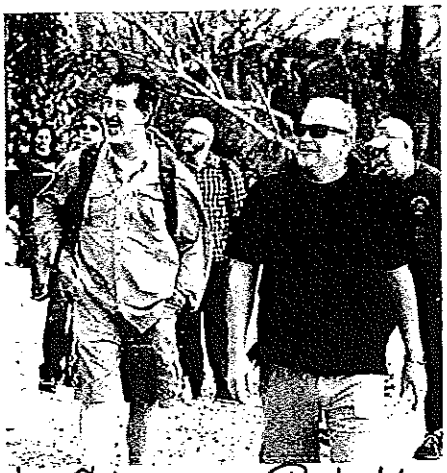
Faculty Associate in Campus Engagement for Sustainability

2016-17 University Club Board

Western Carolina University

294 Belk, Cullowhee, NC 28723

Tel: 828-227-3027 | Fax: 828-227-7163 | http://psds.wcu.edu



Andy Coburn Rob Young

Program for the Study of Developed Shorelines at Western Carolina University

For Expert Research and Strategic Advice to Advance Sound Beach and Shoreline Management

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