

A Coastal Sediment Crisis Of Dust Bowl Proportions: *Why we need a New Deal for beneficially using sediment*

WEDA – EASTERN CHAPTER MEETING
WILMINGTON, DE: OCTOBER 2019

Derek Brockbank
Executive Director, ASBPA

asbpa

American Shore & Beach Preservation Association

Advocating for healthy coastlines

asc
HOMESTEAD.

Land Office at *Brownville Neb*
January 20th 1868.

CERTIFICATE, }
No. 1 }

{ APPLICATION,
No. 1 }

It is hereby certified, That pursuant to the provisions of the act of Congress, approved May 20, 1862, entitled "An act to secure homesteads to actual settlers on the public domain,"

Daniel Kruman has
made payment in full for *SE 1/4 & SW 1/4 of NW 1/4 and SW 1/4 of NE 1/4* of
Section *Twint Six (26)* in Township *four 41 N*
of Range *five (5) E* containing *160* acres.

Now, therefore, be it known, That on presentation of this Certificate to the COMMISSIONER OF THE GENERAL LAND OFFICE, the said *Daniel Kruman* shall be entitled to a Patent for the Tract of Land above described.

Henry M. Atkinson Register.











The Dust Bowl



Hugh Hammond Bennett



Soil Conservation Act

April 27, 1935

Franklin D. Roosevelt

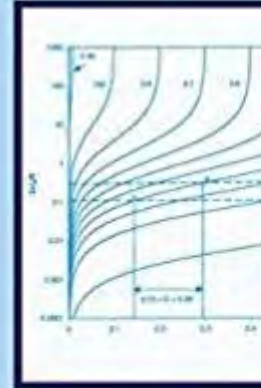


United States Department of Agriculture
Natural Resources Conservation Service



Water Science and Technology Library
**SOIL CONSERVATION
SERVICE CURVE NUMBER
(SCS-CN) METHODOLOGY**

Surendra Kumar Misra



Soil Conservation Techniques



Contour plowing helps prevent erosion from heavy rains.



Terracing prevents erosion from heavy rains on steep hills.



No-till farming prevents erosion by providing cover that reduces water runoff.



Soybeans are a **cover crop** which restores nutrients to soil.

A Coastal Sediment Crisis...





Where has all the sediment gone?



*Shoreline recession... is not “natural,”
but caused by human activity to benefit
the navigation industry.*

- Dr. James Houston

An aerial photograph of a coastal wetland area. The image shows a complex network of water channels and land patches. The land is colored in shades of green, brown, and tan, indicating different vegetation and sediment levels. Two circular callouts with dashed borders are placed on the image. One is at the top center, containing the text 'SEDIMENT WASTED'. The other is at the bottom right, also containing 'SEDIMENT WASTED'. A curved dashed line with an arrow at its end points from the top callout towards the bottom right, following the path of a water channel. The text 'SEDIMENT STARVED WETLANDS' is written along this dashed line.

**SEDIMENT
WASTED**

SEDIMENT STARVED WETLANDS

**SEDIMENT
WASTED**

An aerial photograph of a coastal delta region, showing a mix of green vegetation, brown sediment deposits, and blue water. The sediment appears to be eroding or being lost into the water.

WASTED SEDIMENT

418,859,060.3

TONS OF LOST SEDIMENT

SINCE JANUARY 1, 2014

Parallel Causes:

<u>Cause</u>	<u>Dust Bowl</u>	<u>Coastal Crisis</u>
<i>Economic driver:</i>	Farming	Navigation & Flood Control
<i>Political hurdle:</i>	USDA mission was to maximize production	USACE missions are nav & flood control
<i>Technological change:</i>	Mechanization	Control of rivers & inlets
<i>“Climatic” Disaster:</i>	Drought	Global Warming leading to Sea Level Rise & Storm Intensification

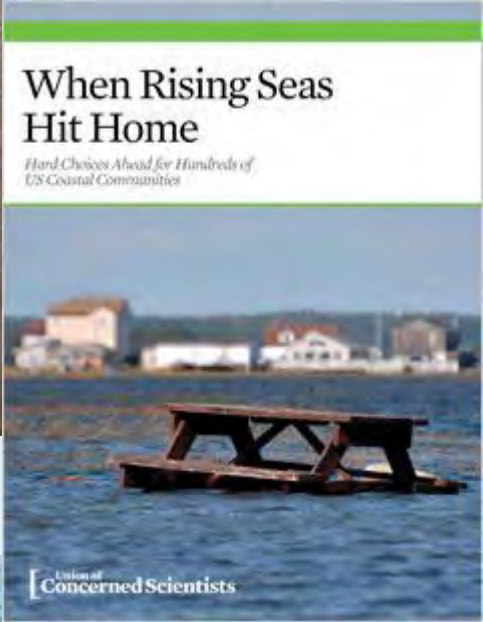
Parallel results – Community Destruction



Forced migration



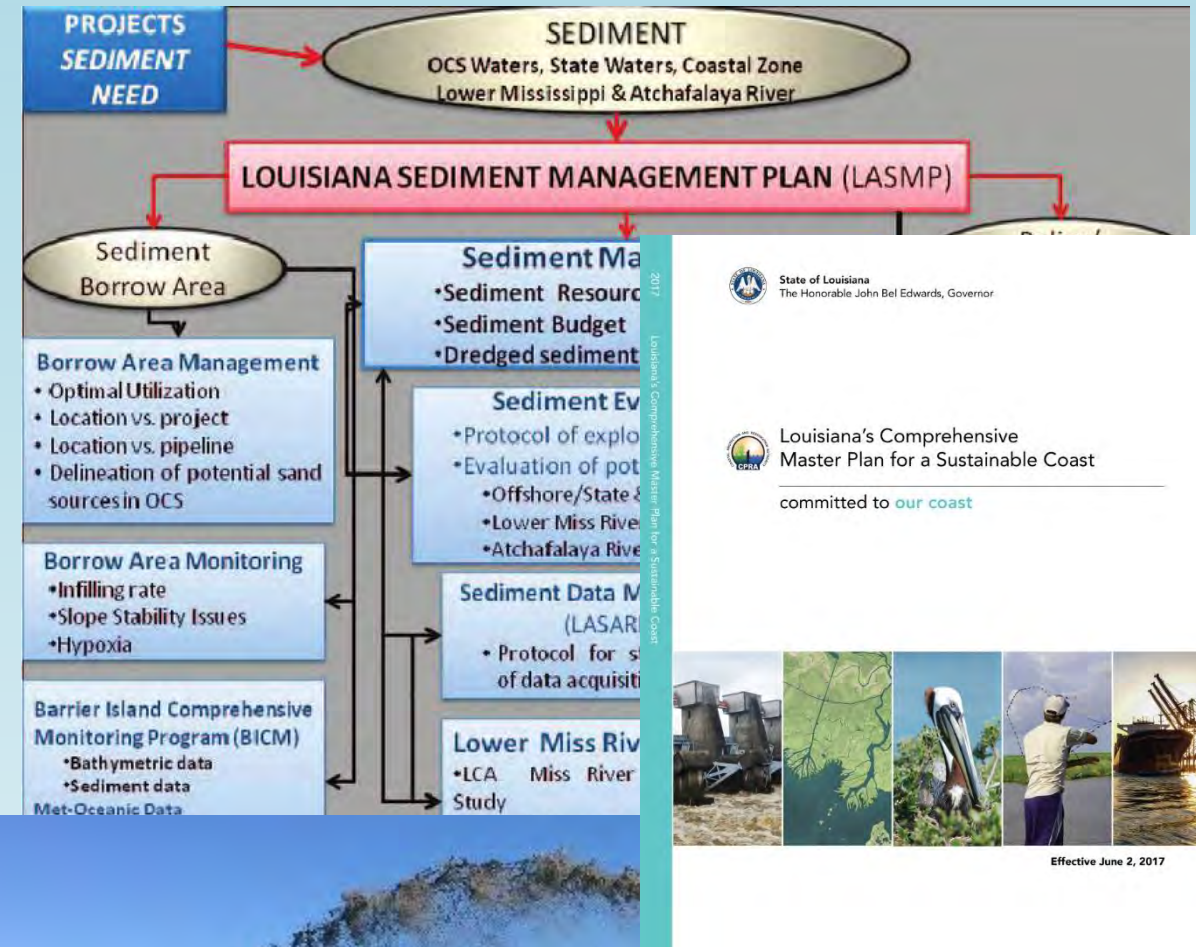
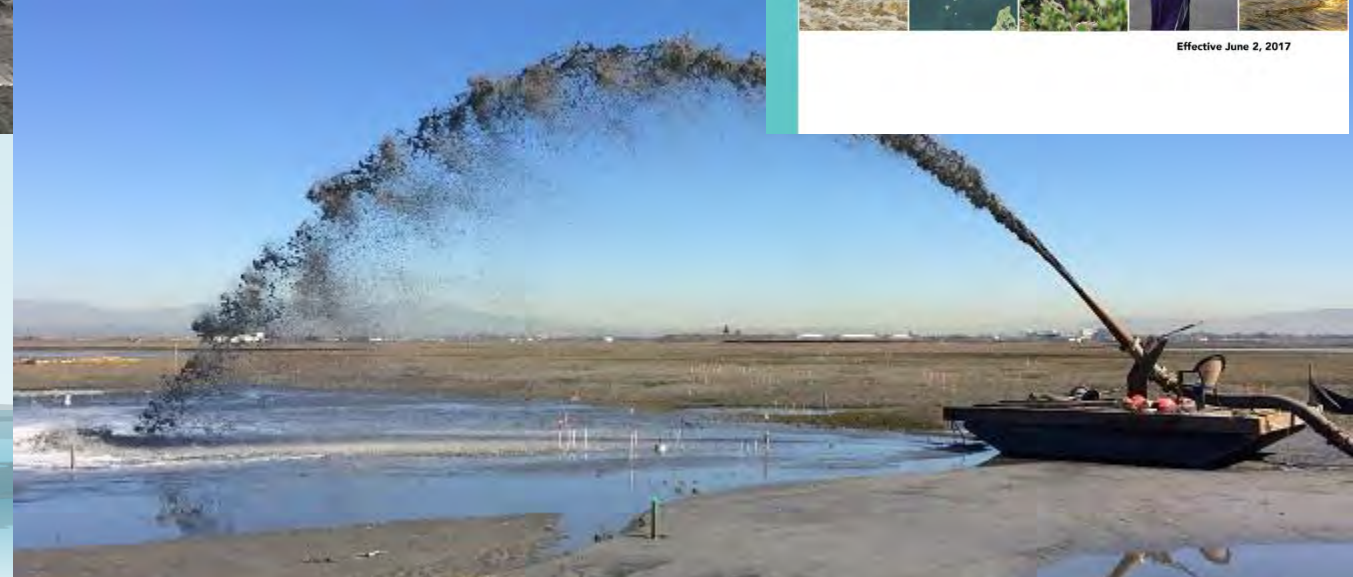
Economic trouble nationwide



Parallel responses?

<u>Solution</u>	<u>Dust Bowl</u>	<u>Coastal Crisis</u>
<i>Science:</i>	Land grant universities; USDA research	Sea Grant universities; Fed- Academic coastal research program.
<i>Demonstration projects:</i>	USDA soil erosion experiment stations	BUDM Pilot Projects (Sec. 1122, WIIN Act)
<i>Change in economic structure:</i>	Farm Bill and NRCS conservation programs	???
<i>Sustained federal commitment:</i>	~\$6 billion annually	???
<i>Investment in people & infrastructure:</i>	New Deal: CCC, TVA, Highways	???

What's already happening:



State of Louisiana
The Honorable John Bel Edwards, Governor

Louisiana's Comprehensive Master Plan for a Sustainable Coast

Louisiana's Comprehensive Master Plan for a Sustainable Coast
committed to **our coast**

Effective June 2, 2017

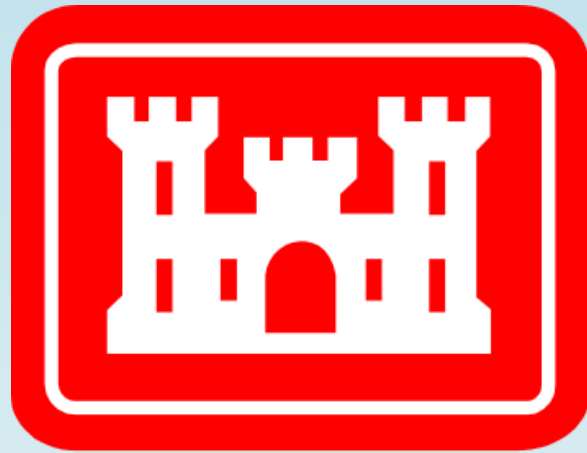
Question:

What would it take to use...



...of dredged sediment beneficially?

1. Change the understanding of the USACE
“federal standard” of least cost disposal.



**US Army Corps
of Engineers®**

2. Ban open water disposal.



3. Sustained federal investment



4. Commitment to Infrastructure, People & Nature



5. Prioritizing sediment placement



Restore
and
Retreat

An aerial photograph of a vast agricultural landscape. The foreground and middle ground are dominated by numerous rectangular plots of land, each filled with rows of young, green crops, likely corn. The rows are spaced evenly and run parallel to each other. The plots are separated by narrow dirt roads or paths. In the background, there are more fields, some of which appear to be harvested or in a different stage of growth, showing a golden-brown hue. The horizon is marked by a range of low mountains or hills under a clear sky. The overall scene depicts a highly organized and intensive farming operation.

Can this be done?

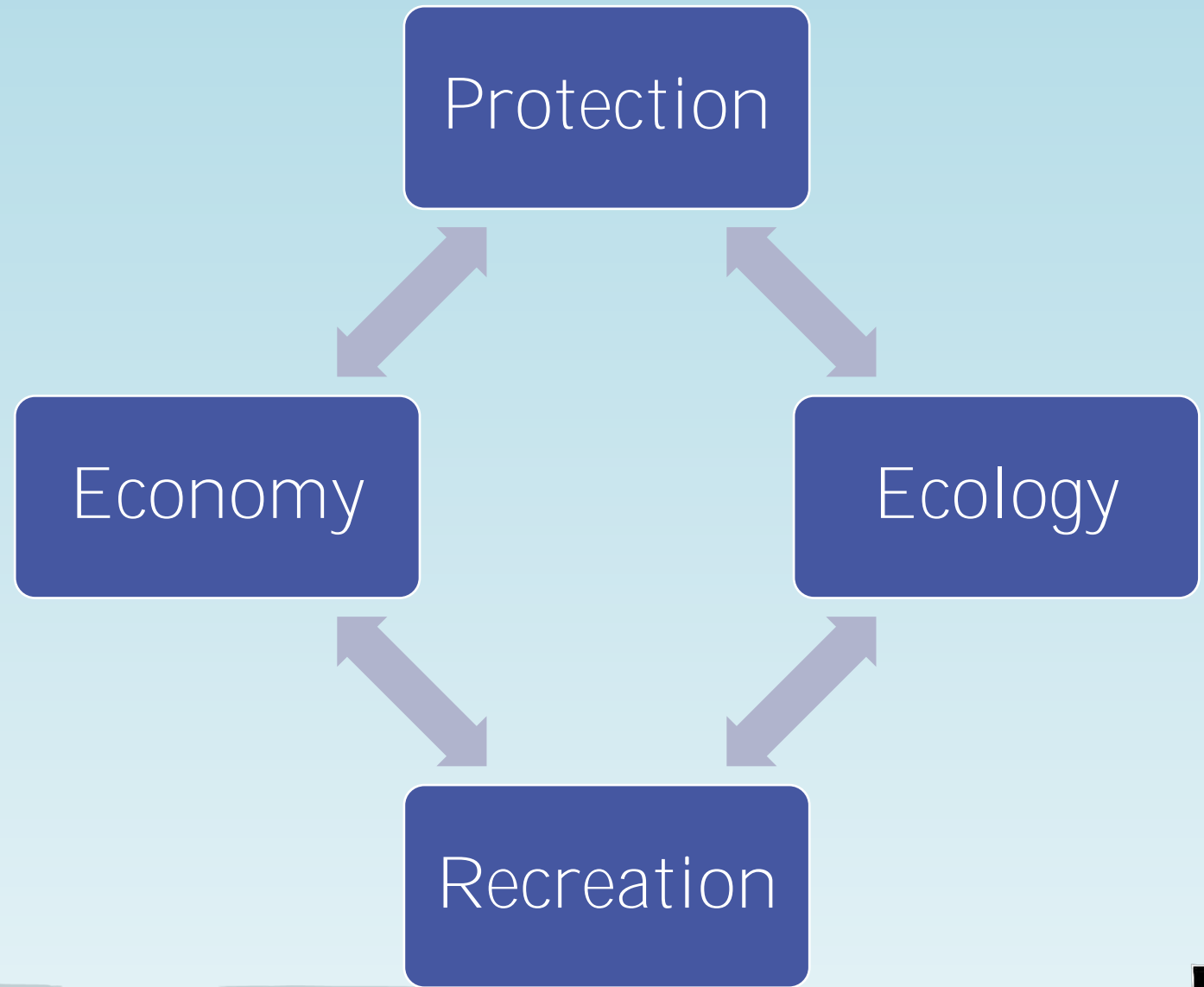
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Vision:

*Advocating
for healthy
coastlines*



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Questions?



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