

The background of the slide is a photograph of a lighthouse and its associated buildings situated on a rocky cliff overlooking the ocean. The lighthouse is white with a red roof and a lantern room. The buildings are also white with red roofs. The ocean is a deep blue with white waves crashing against the base of the cliff.

**Financing Protection from Rising Bay Levels:
California's Mello-Roos Law**

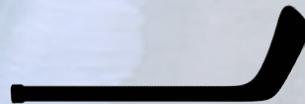
A Presentation for BCDC's Commissioner Working Group:
Financing the Future

April 6, 2017

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Public Financing Basics for Land Secured Financing



Public Financing Basics

- ▶ Some projects are too large to fund on a pay-as-you-go basis
- ▶ Public agencies can issue various forms of municipal bonds to finance major projects through debt
- ▶ Some debt can be paid solely from existing revenues
- ▶ Debt for major new projects often needs to be paid from new revenue sources
 - ▶ New revenue sources in California typically need voter or landowner approval
 - ▶ Exception: debt secured by utility rates, such as water, sewer or electric power

What is Land Secured Financing?

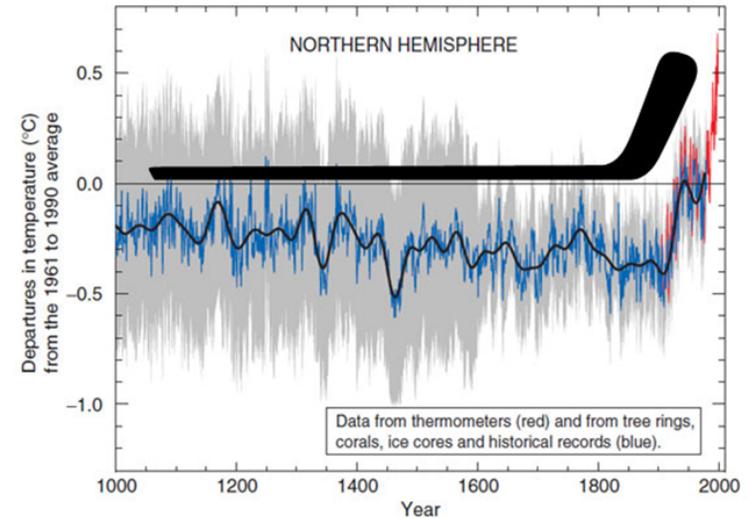
- ▶ A financing secured by a pledge of revenues generated from some kind of tax or assessment on legal parcels
- ▶ The remedy for failure to pay the tax or assessment is typically foreclosure by the taxing public agency on the parcel not paying
 - ▶ No recourse to actual parcel owner
- ▶ Examples of land secured financing in California
 - ▶ General obligations bonds (ad valorem taxes)
 - ▶ Mello-Roos bonds (special taxes on parcels)
 - ▶ Assessment bonds (assessments on parcels)
 - ▶ Parcel taxes (special parcel tax)

Land Secured Financing Types for Rising Bay levels

- ▶ General obligation bonds: an increase in ad valorem taxes approved by a 2/3 vote of electorate
- ▶ Parcel tax (like SF Bay Restoration Authority's Measure AA): 2/3 vote of electorate
- ▶ Assessment district: improvements of "special benefit" to parcels approved by a majority of parcel owners
 - ▶ Improvements must be of special benefit to parcel owners (e. g. a sidewalk in front of your property)
- ▶ Community facilities district under Mello-Roos law: great flexibility in how each parcel is taxed

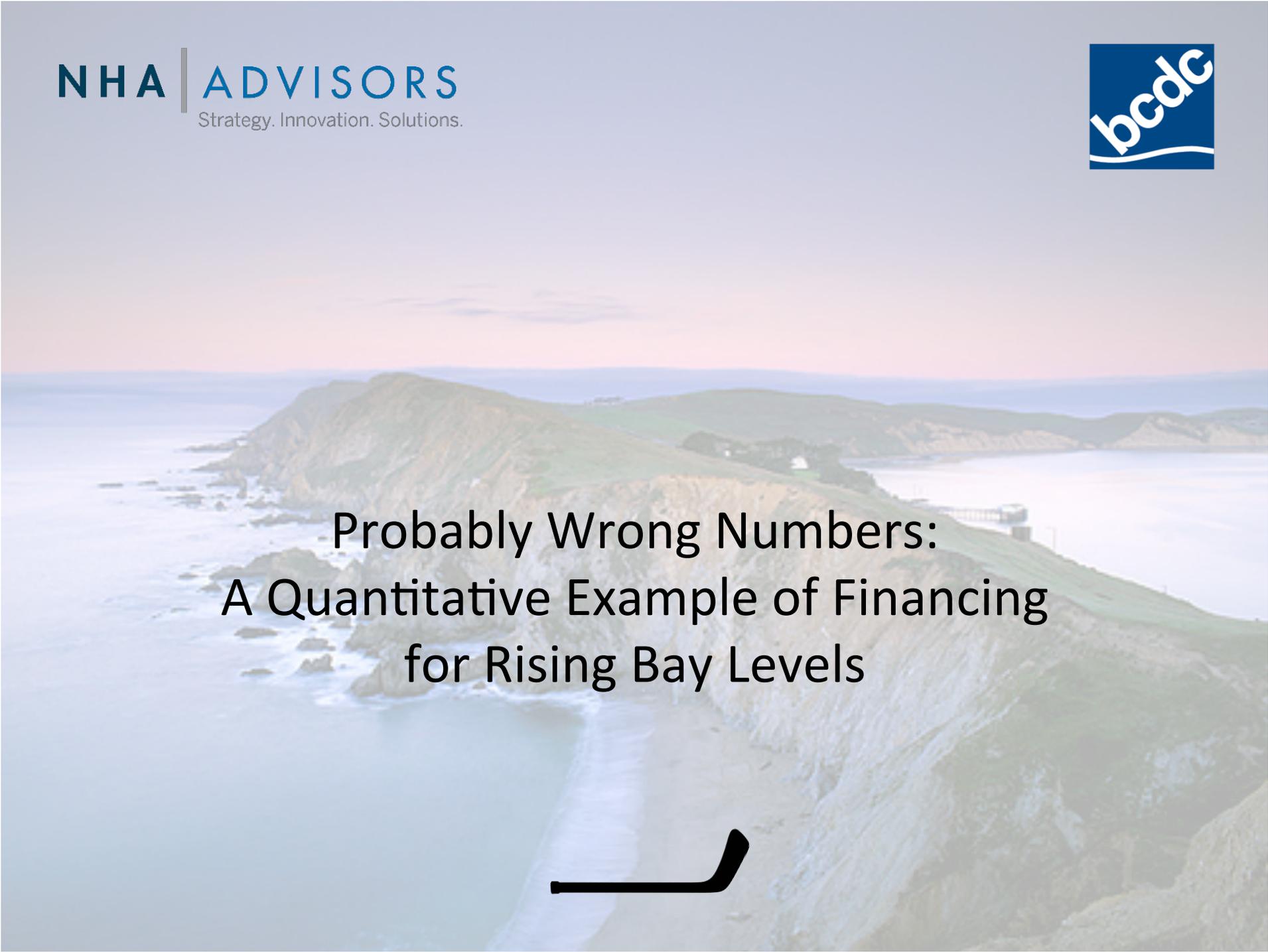
“Hockey Stick” Analogy and Public Finance

- ▶ Climate change scientists frequently use the shape of a hockey stick as an analogy
 - ▶ The rate of change in climate starts gradually and then accelerates abruptly
 - ▶ Slope of the curve is shallow at first then steepens quickly
- ▶ We want to sell bonds and fund projects while we are on the shallow part of the hockey stick
 - ▶ Amortization periods shorten and costs dramatically increase on the steep blade of the hockey stick
- ▶ We do not really know where we are on the hockey stick— change may be in shallow part for years or we may be nearing the steep part
- ▶ Will voters approve large debt issues now if we cannot tell them when the projects are actually needed?

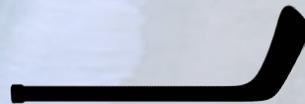


Cost Allocation and Tax Base in Public Finance

- ▶ How should the costs of protecting property from rising Bay levels be allocated?
 - ▶ By cost of actual project by County or by subareas of each County?
 - ▶ By avoided cost for each County or subarea of each County? (Avoided cost means value of property or services saved from inundation)
- ▶ What tax base is available for land secured finance?
 - ▶ Assessed valuation of property
 - ▶ Number of parcels
 - ▶ Geographic features, e.g. proximity to inundation areas
 - ▶ Parcel size
 - ▶ Building size
 - ▶ Low income residents or other indicators of social distress (tax reduction)
- ▶ The biggest downside: “toxic debt” – where the present value of the tax burden exceeds the value of the property

The background of the slide is a scenic photograph of a coastal landscape. It shows a wide, sandy beach in the foreground, leading to a calm bay. In the distance, there are rolling green hills and a small white building on a hillside. The sky is a soft, hazy blue, suggesting a clear day. The overall tone is serene and natural.

Probably Wrong Numbers:
A Quantitative Example of Financing
for Rising Bay Levels



Probably Wrong Assumptions for Analyzing Land Secured Financing Options

- ▶ **First assumption: the cost of protecting the Bay Area from a 4' to 5' Bay level rise is \$35 billion**
 - ▶ Though this number is most likely wrong, we use it to model and compare the relative impact of each financing option
 - ▶ Creating a process by which costs are allocated fairly to each parcel in the Bay Area is one of our most fundamental challenges
 - ▶ \$35 billion is a “back of the envelope” number from CHARG (Coastal Hazard Adaptation Resiliency Group)
- ▶ **Second simplifying assumption: all \$35 billion would be funded by a single bond issue**
 - ▶ Realistically, construction of protection from rising Bay levels would be done in phases over a period of years, requiring separate bond issues for each phase
- ▶ **A third simplifying assumption: no Federal participation in cost of Bay protection**
 - ▶ Army Corps of Engineers flood protection projects are typically funded 80% by the Federal government and 20% from local agencies
- ▶ 30 year financing term
- ▶ 5% interest rate

Debt Amortization Periods and the “Hockey Stick”

- ▶ Bay levels may rise for decades
- ▶ Any improvements we finance now may need to be improved again as Bay levels continue to rise
- ▶ Will the bonds for the last set of improvements be paid off before the next set is needed?
 - ▶ The shorter the amortization period, the more likely that the old bonds will be paid off before new bonds are needed
 - ▶ Shorter amortization periods have higher annual costs
- ▶ This is where “project finance” turns into “process finance” 

Term	Annual Cost for (Hypothetical) \$35 Billion Debt
30 years	2,300,000,000
25 years	2,500,000,000
20 years	2,800,000,000
15 years	3,400,000,000
10 years	4,500,000,000

A Hypothetical Cost Allocation Comparison

- ▶ Creating a process by which costs are allocated fairly to each parcel in the Bay Area is one of our most fundamental challenges
- ▶ If the Army Corps is involved with traditional 80/20 funding, all of these costs are reduced by 80%.

County	Assessed Valuation by County Basis		Uniform Parcel Tax Basis		CHARG Big Storm Avoided Cost by County Basis (1)	
	Percentage Allocation by Basis	Annual Average Cost per Parcel	Percentage Allocation by Basis	Annual Average Cost per Parcel	Percentage Allocation by Basis	Annual Average Cost per Parcel
Alameda	17.04%	781	22.21%	1,017	7.31%	335
Contra Costa	12.18%	759	16.33%	1,017	7.50%	467
Marin	4.75%	1,092	4.42%	1,017	11.89%	2,734
Napa	2.35%	1,190	2.01%	1,017	0.36%	180
San Francisco	14.02%	1,547	9.22%	1,017	0.05%	5
San Mateo	12.81%	1,245	10.47%	1,017	10.80%	1,050
Santa Clara	28.12%	1,359	21.06%	1,017	60.72%	2,934
Solano	3.30%	542	6.19%	1,017	1.35%	223
Sonoma	5.44%	684	8.09%	1,017	0.03%	4

(1) Avoided cost Big Storm numbers are for rain caused flooding, not rising Bay levels. Numbers are here for example of how different Avoided Cost basis may be.

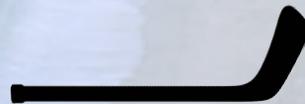
Hypothetical Impact of an Assessed Valuation-Based Tax on the Bay Area's Largest Taxpayers (Excluding PG&E)

Taxpayer	Secured Assessed Valuation (in 000's)	Annual Ad Valorem Based Tax Levy
Chevron USA	\$3,410,625	\$5,260,437
Genentech	\$1,846,046	\$2,847,281
Cisco Technology	\$1,590,333	\$2,452,878
Campus Holding, Inc.	\$1,538,709	\$2,373,255
Equilon Enterprises LLC	\$1,516,729	\$2,339,354

- ▶ PG&E has the largest combined assessed valuation in all nine Bay Area counties
- ▶ A home with an assessed value of \$500,000 would pay \$770 annually in ad valorem taxes
- ▶ Remember, if the Army Corps is involved for 80/20 funding, all these costs are reduced by 80%

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Using the Mello Roos Law to Fund Projects for Rising Bay Levels



Brief History of Mello-Roos Districts

- ▶ Law adopted in 1982
- ▶ A response to Proposition 13:
 - ▶ Assessment districts could not be effectively used to fund projects of “general benefit”, such as a new City Hall or wastewater treatment plant
 - ▶ Law provides a way to tax parcels with great flexibility to pay for projects of general benefit
 - ▶ Mello Roos taxation districts are called “Community Facilities Districts”
- ▶ Primary use has been to fund infrastructure required for new development
 - ▶ Authorized by landowner vote by developer
- ▶ Infrequently used to fund community facilities for existing development
 - ▶ Approved by majority of landowners if less than 12 registered voters in CFD
 - ▶ Approved by 2/3 vote of electorate if 12 or more registered voters

Benefits of a Mello-Roos Financing

- ▶ Flexibility in how tax rates per parcel are set
 - ▶ “Rate and method of apportionment” utilizing a special tax formula
- ▶ A variety of ways to determine a parcel’s tax liability:
 - ▶ Proximity to Bay or inundation zones
 - ▶ Level of development (e.g. building square footage)
 - ▶ Type of land use
 - ▶ Low income parcel owner discounts are possible
 - ▶ Publicly owned property may be taxed
 - ▶ Multiple bases for taxation can be “layered”
 - ▶ Only major restriction: ad valorem basis cannot be used

Voter Questions Arising with Voter-Approved and Land Secured Debt

- ▶ Are my taxes going to pay for improvements that benefit me, or are they going somewhere else?
 - ▶ Mello Roos law allows use of zones to localize benefits
 - ▶ This is why cost allocation and tax base choices are so important
- ▶ My neighbor pays less than I do. Why?
 - ▶ This is most likely to occur with an ad valorem-based tax
- ▶ How do I know that we really need this tax?
 - ▶ Convincing voters that the risks of climate change are real is necessary
- ▶ The “big guys” are not paying enough. It’s unfair.
 - ▶ This is why a uniform parcel tax in the amount needed to mitigate rising Bay levels is not likely to work
- ▶ I don’t live in an inundation zone, I should not have to pay.
 - ▶ Again, the zones allowed by Mello-Roos can mitigate some of this concern
- ▶ That person’s property gets a lot more benefit from this than I do. Why aren’t they paying more?
 - ▶ This is where the avoided cost question comes into play



Next Steps



Next Steps (in no particular order)

- ▶ Get more accurate project cost estimates (CHARG?)
 - ▶ Also consider looking at avoided costs at some point in the future
- ▶ Bring the Army Corps to the table (reducing our cost by billions is worth a conversation)
- ▶ Start working on cost allocation scenarios based on more accurate estimates
- ▶ Potential cost allocation scenarios:
 - ▶ Cost by County
 - ▶ Cost by inundation zone
 - ▶ Cost by land use
 - ▶ Cost by assessed valuation
 - ▶ Cost by building square footage
 - ▶ Comparison of cost impacts on “average” homeowner and on major taxpayers
- ▶ The hockey stick question: what is the appropriate amortization period for “process finance”

