

# Current Delta Agriculture Revenues

Crop Class	<i>San Joaquin</i>	<i>Sacramento</i>	<i>Yolo</i>	<i>Solano</i> <sup>1</sup>	<i>Contra Costa</i> <sup>2</sup>	TOTAL
Deciduous	25,118	41,738	3,345	1,347	8,667	80,215
Field	65,453	17,164	4,860	9,331	19,327	116,135
Grain	14,539	2,775	1,618	4,615	288	23,835
Pasture	46,801	5,902	5,753	8,113	3,084	69,653
Truck	217,491	19,148	11,570	3,389	13,871	265,469
Vineyard	32,099	28,474	32,718	5,042	6,657	104,990
<b>TOTAL</b>	<b>401,501</b>	<b>115,201</b>	<b>59,864</b>	<b>31,837</b>	<b>51,894</b>	<b>660,297</b>

- Animal Production revenue is another \$93 million, mostly dairy.
- Total Agricultural Revenues estimated at \$753 million (2009\$).

# Current Economic Impact of Delta Agriculture on 5 counties

- Based on \$753m in agriculture revenue. Assumes 25% of Delta wine grapes, most tomatoes are processed in Delta counties. All other food and beverage manufacturing in Delta counties are excluded.

Table 20 Economic Impact of Delta Agriculture on 5 Delta Counties

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	5,465	\$237,501,354	\$507,262,180	\$1,605,036,480
Indirect Effect	5,685	\$269,323,135	\$383,743,710	\$796,612,528
Induced Effect	2,560	\$116,080,527	\$215,710,160	\$367,500,362
<b>Total Effect</b>	<b>13,709</b>	<b>\$622,905,032</b>	<b>\$1,106,716,150</b>	<b>\$2,769,149,432</b>

# Projection and Policy Impacts

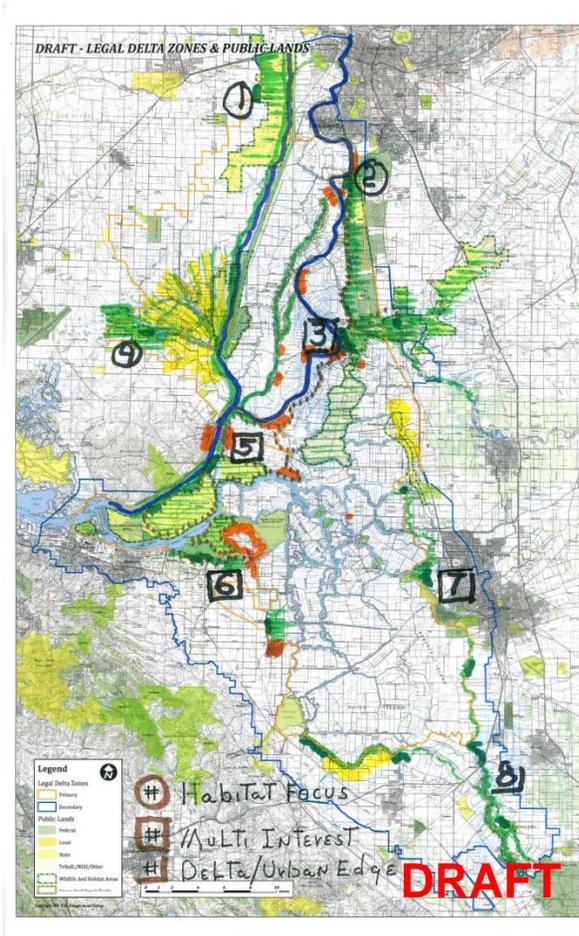
- Baseline projection. Over the next 40 years, shift to higher value crops increases revenue 15% (115 million) following trends seen across Central Valley.
- Isolated Conveyance, as described in Nov. 2010 BDCP, estimated to decrease revenue by about \$50 million.
- Habitat conservation measures reduce agricultural revenue through land conversion. Largest impact from 65,000 acres tidal marsh

# Economic Impact of Recreation

- Visitation estimated at ~12 million per year
- Direct economic impacts from *resource-related* and *right-of-way/tourism related* trips are estimated at roughly **\$250 million inside the Delta (2011\$)**
- Additional economic impacts associated with urban recreation are not quantified
- Recreation supports 2,716 jobs within 5 county area
- Impact of Delta Recreation statewide - \$600 million effect and 4,936 jobs

Resource and Right-of-Way/Tourism Related	Expenditure Inside Delta
<b>Boating, Fishing and Camping</b>	
Accommodation	\$33,572,432
Food	\$53,354,167
Supplies	\$72,570,711
Other	\$34,928,893
<b>Total</b>	<b>\$194,426,203</b>
<b>Hunting</b>	
Accommodation	\$4,528,863
Food	\$1,980,232
Supplies	\$7,119,852
Other	\$3,488,659
<b>Total</b>	<b>\$17,076,407</b>
<b>Wildlife Viewing/Other Resource-Related &amp; ROW Activities</b>	
Accommodation	\$4,188,801
Food	\$5,805,212
Supplies	\$3,827,270
Other	\$1,592,472
<b>Total</b>	<b>\$15,411,754</b>
<b>Driving for Pleasure and Tourism</b>	
Accommodation	\$2,209,700
Food	\$12,255,447
Supplies	\$8,078,791
Other	\$1,680,942
<b>Total</b>	<b>\$24,225,881</b>
<b>Totals</b>	
Accommodation	\$44,498,798
Food	\$73,375,059
Supplies	\$91,597,423
Other	\$41,688,967
<b>Total</b>	<b>\$251,140,245</b>

# Principles and Enhancement Strategy Plan



- Protect agriculture
- Enhance Legacy Communities
- Avoid risk areas
- Protect and grow market share
- Encourage private enterprise
- Establish focal point areas
- Relate to habitat areas
- Establish “facilitator” organization

# Policy Scenario Impacts

**Predicted Trends In Major Recreation Categories under Policy Scenarios Conditions**

Activity Type	Policy Scenarios				
	Isolated Conveyance	Habitat Conservation	Flood Control - Islands	Flood Control - Increased Levees	Regulatory Changes
<b>Resource Related</b>					
Boating	↓	↑	↓	↔	↓
Fishing	↑	↑	↓ ↔	↔	↔
Hunting	↓	↓ ↔	↓	↔	↔
Wildlife Viewing/Outdoor Photography	↓	↑	↔	↔	↔
Camping	↓	↑	↓	↔	↔
<b>Right-of-Way/Tourism Related</b>	↓	↔	↔	↑	↓
<b>Urban Parks Related</b>	↔	↑	↔	↑	↓
<b>Overall</b>	↓	↑	↓	↔	↓

# Delta Economic Sustainability

## □ Strengths

- Agricultural abundance
- Other locational attributes:
  - Water access
  - Transportation infrastructure
  - Labor markets
  - History and culture
  - Community character/ quality of life

## □ Key Opportunities

- Capitalize on strengths in agri-tourism
- Legacy Communities as recreational “hubs”
- Branding strategies
- Support and strengthen tourism/ recreation
- Improve access (by various modes)
- Interpretive opportunities
- Opportunity sites

## □ Weaknesses

- Flood protection
- Limited processing ability
- Infrastructure constraints
- Regulatory threats

























# Within the legal Delta:



- 996 miles total
- 379 miles project levees
- 64 miles non-project urban levees
- 553 miles other non-project levees

# Within the Delta core:



- 670 miles total
- 193 miles project levees
- 477 miles non-project levees
- Over 100 miles already at or about the Delta-specific PL 84-99 standard

# Approaches to reducing risk:



1. More robust levees
2. Improve flood-fighting and emergency response following earthquakes
3. Improve emergency response following failures

# Cost of improvements:



- All but maybe 50 miles are already at or around HMP or better
- To upgrade from at or around HMP to PL 84-99 costs \$1 -2m per mile, the biggest variable being whether there is suitable borrow material available on-island - assumes work is executed by reclamation districts.

# Summary of expenditures:



- Subventions program 1973-2010:

  - State share \$147m

  - Local share \$118m

  - Total \$265m

- Special projects 1990-2010

  - State share \$238m

- Total \$503m +

# Monies in the immediate pipeline:

- Subventions 08-09, 09-10 \$30m (incl. local)
- Special projects 08-09, 09-10 \$122m + local
- CALFED Levee Stability Program (USACE) \$195m + local
- FY 10-11, 11-12 ?? Strategic pause ??

# Reasons why there already is improved system robustness:

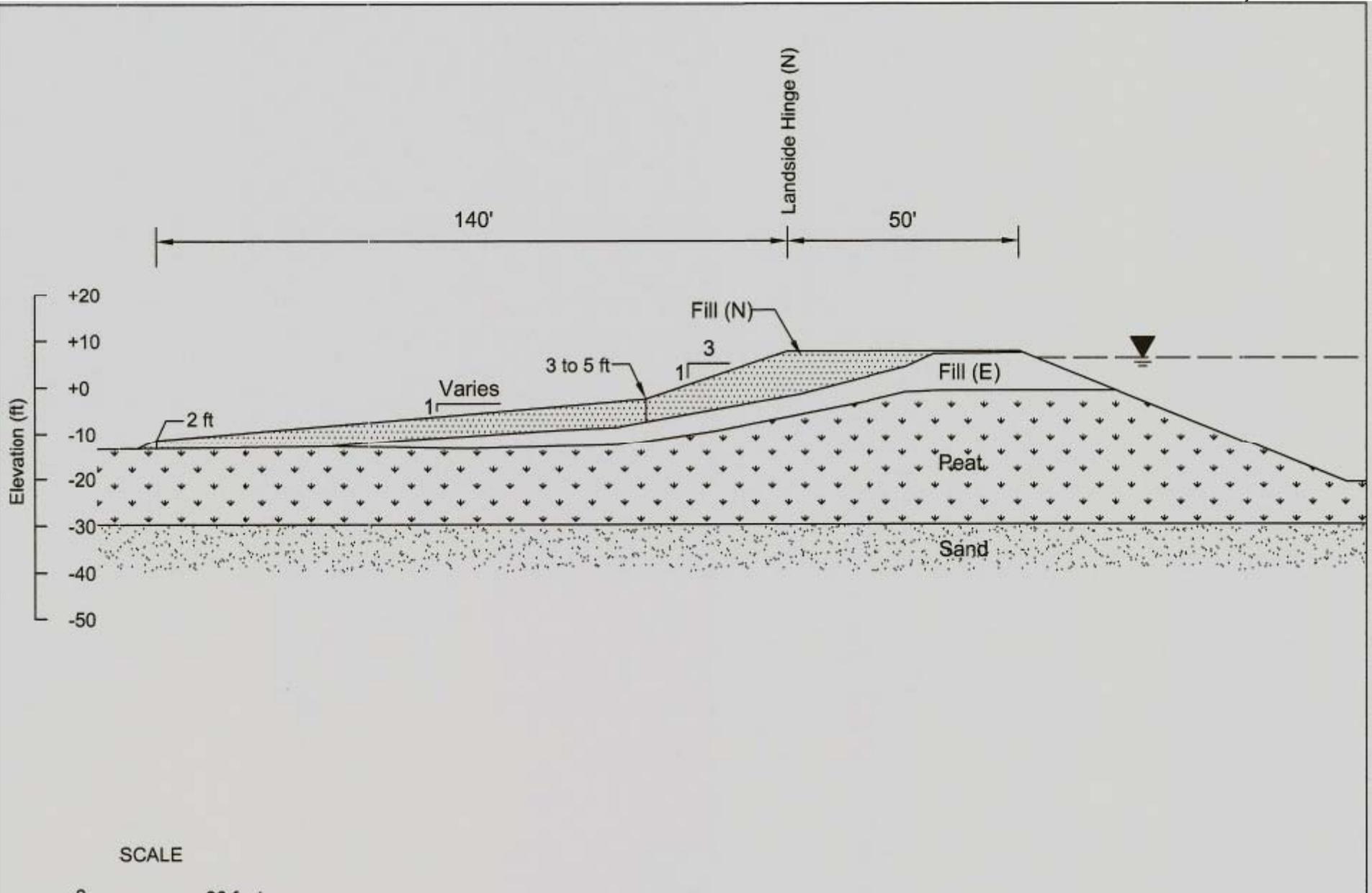
- \$0.5b investment
- Since the cessation of dredging, much more widespread use of rock rip-rap
- Weak spots have already failed and been repaired!

Therefore use of historic data on levee failures is inappropriate.

# Beyond PL 84-99:



- PL 84-99 levees that do not contain loose saturated sands are already seismically-resistant
- But further widening of most levees in the Delta core is desirable to provide greater seismic resistance, to address possible sea-level rise, and to allow vegetation on the waterside



SCALE

0 30 feet



1 inch = 30 feet

Seismically Repairable Levee		Widened Crest	
Webb Tract			
Sacramento-San Joaquin Delta, California			
Hultgren - Tillis Engineers		Project No. 113.15	Plate No. 7

# Cost of further improvement:

- \$2-3m per mile
- Say \$1-2b - not \$50b!
- Source of funding: everyone who benefits:
  - Landowners, Owners of infrastructure,
  - Agencies that convey water thru the Delta
- Plus State government to protect and enhance
- Plus Federal government for heritage, navigation and national security reasons



## Comments & Questions?



Please send additional comments to:

[espcomments@pacific.edu](mailto:espcomments@pacific.edu)

Alternatively, address them to:

ESP Comments  
Business Forecasting Center  
University of the Pacific  
3601 Pacific Avenue  
Stockton, CA 95211