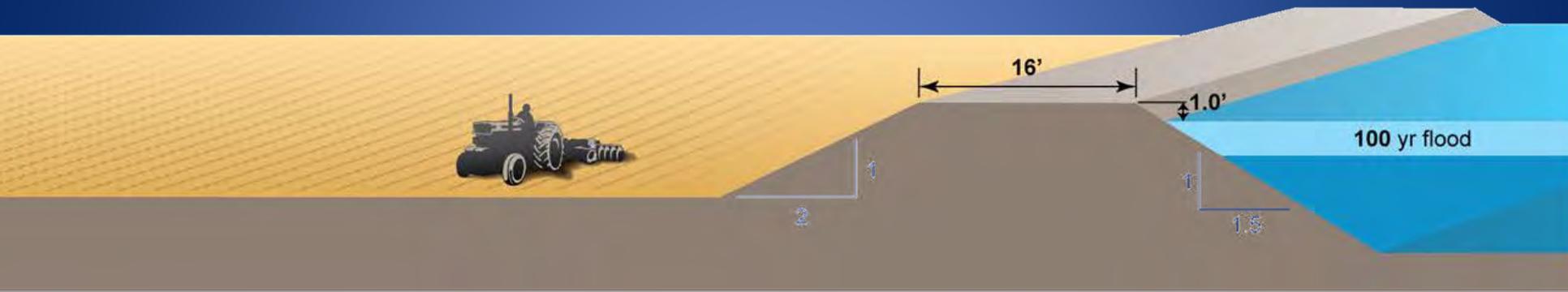


Water Education Foundation's Delta Levees Standards Conference



Perspectives on Delta Levees Standards

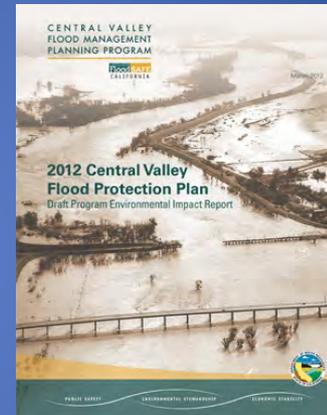
David Mraz

Department of Water Resources

Delta Levee Systems

- Project Levee – part of the State Plan of Flood Control.

– See the CVFPP



- Non-Project – remaining 700+miles of levees that protect the Delta.

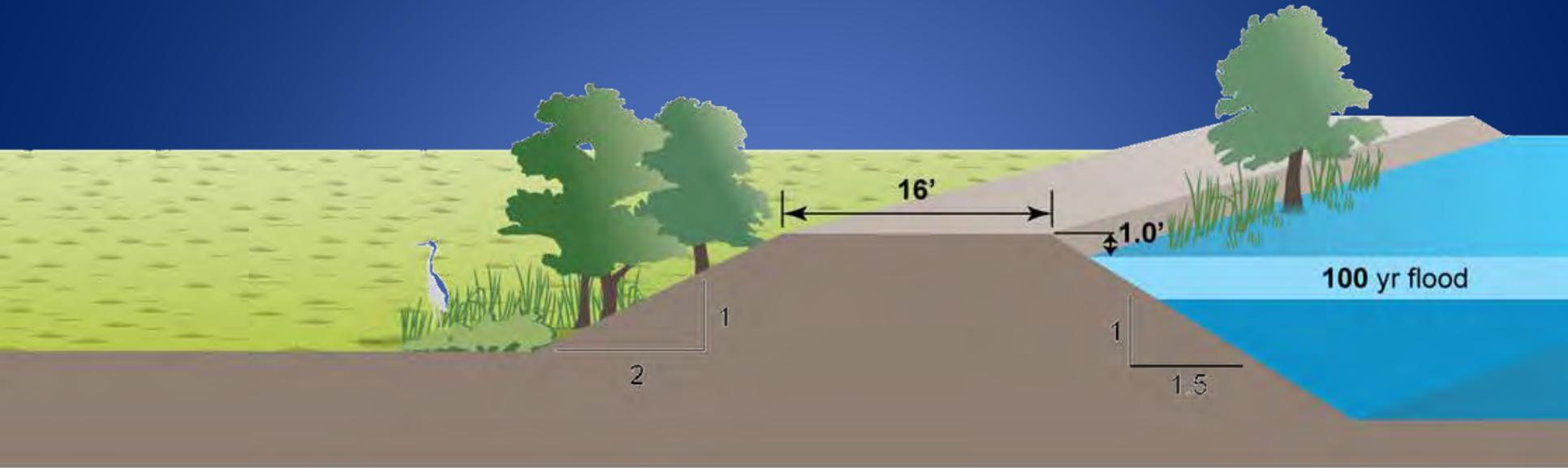
Configuration Vs. Standard

- *Levee Configuration* – prescribed geometry and features judged to provide acceptable behavior.
- *Levee Standard* – requirements analyzed and adjusted to achieve performance under specified loading.

Level of Protection

- Assets Protected
 - Wildlife
 - Infrastructure
 - Agriculture
 - Urban
- Legal & Societal Requirements
 - HMP
 - California Urban Standard (200-Year)
 - FEMA 100-Year

Wildlife & Habitat



Level of Protection

Occasional Flooding is

Acceptable

Restoration Based on

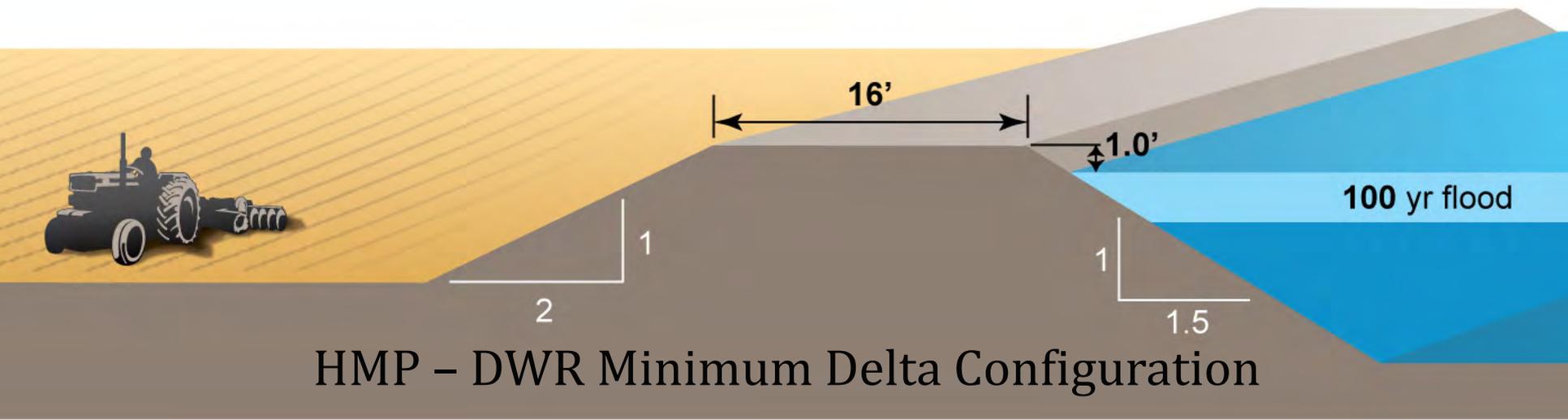
Ecosystem Consideration

Levee Configuration

HMP or Below

Design Flood < 100-Yr

Agricultural Protection



Levee Configuration

Static Factor of Safety 1.0
(assumed)

Small Agriculture

Few or No Delta Effects from
Flooding

Level of Protection

HMP < 100-Year

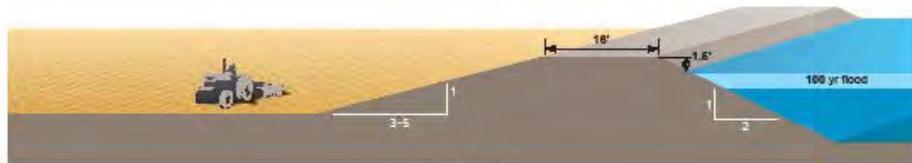
Active Flood Fighting
Restoration Based on
Economics

Agricultural Protection

Agricultural



Hazard Mitigation Plan



PL84-99

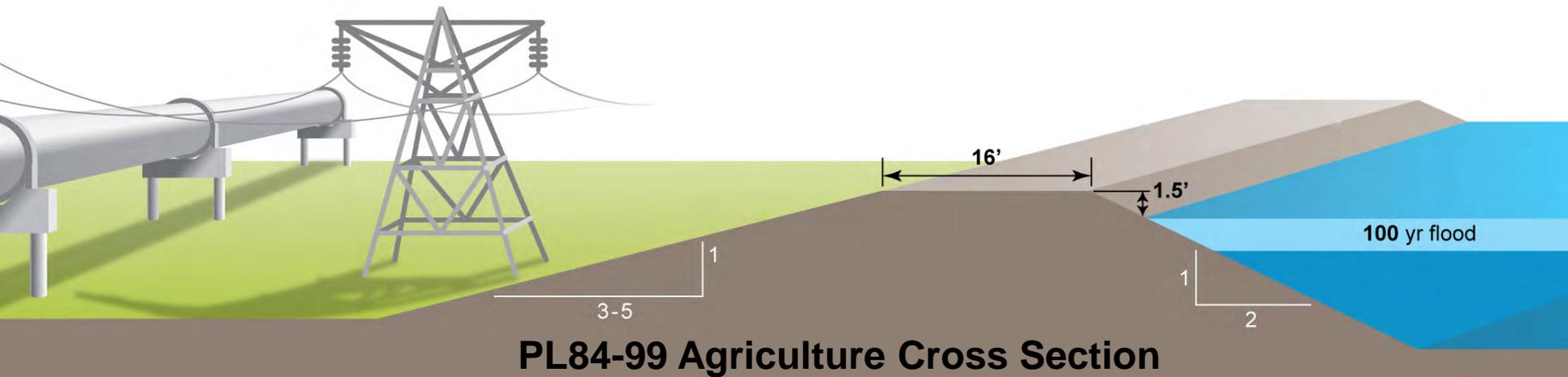


Bulletin 192-82



Seismic-Fail / Repair

Infrastructure Protection



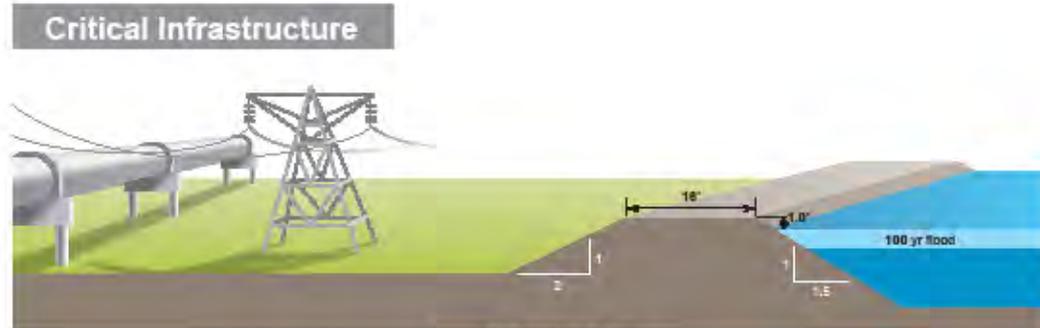
Levee Standard

- Static Factor of Safety 1.25 (calculated)
- Agriculture + Infrastructure
- Delta-wide & Statewide Effects from Flooding

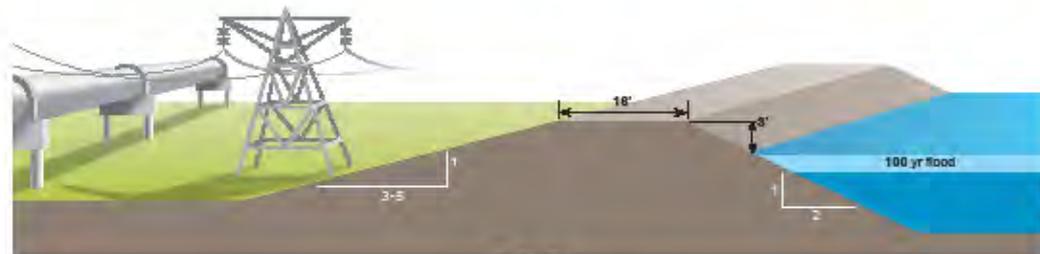
Level of Protection

- Approx. 100-Year
- Active Flood Fighting
- Restoration Based on Economics + Infrastructure & Delta-wide Effects

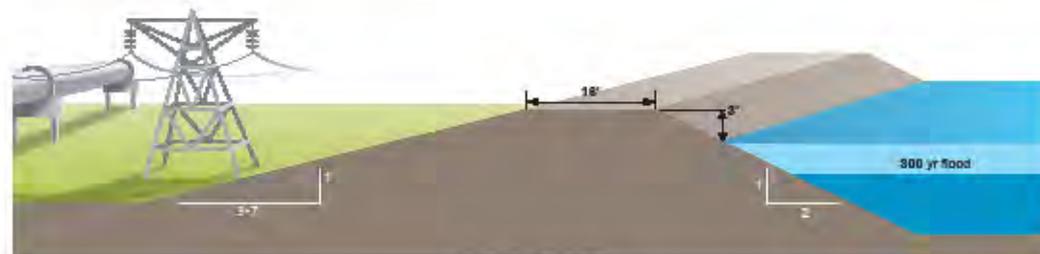
Infrastructure Protection



Hazard Mitigation Plan

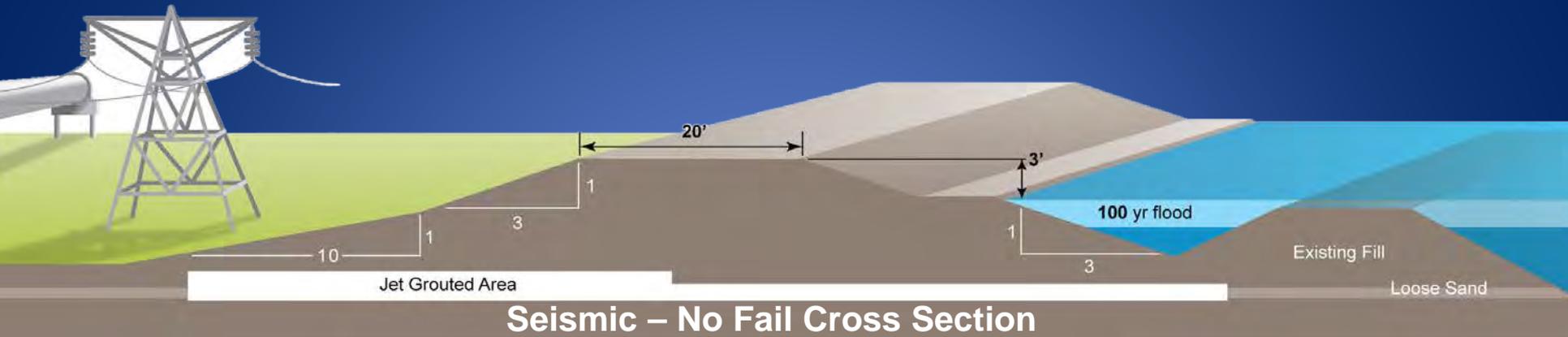


PL84-99



Bulletin 192-82

Critical Infrastructure Protection



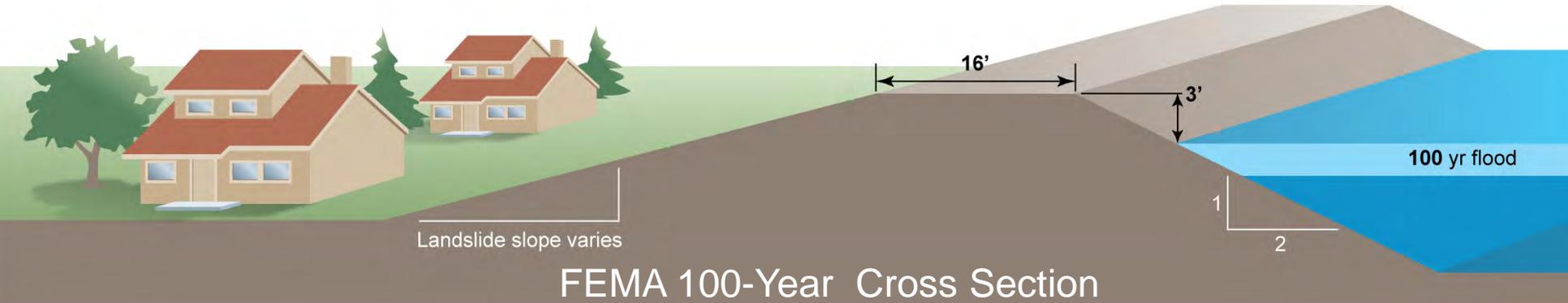
Levee Standard

- Dynamic Factor of Safety 1.0+ (calculated)
- Static Factor of Safety 1.25+
- Critical Infrastructure + Ag.
- Significant Statewide Effects from Flooding

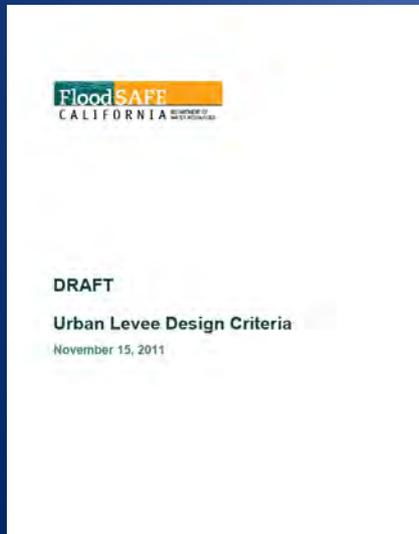
Level of Protection

- 100-Year
- Active Flood Fighting
- Restoration Based on Infrastructure & Statewide Effects

Urban



Levee Standard



- See the Urban Levee Design Standard – Soon to be released

Flood Protection of the Future



Thank You