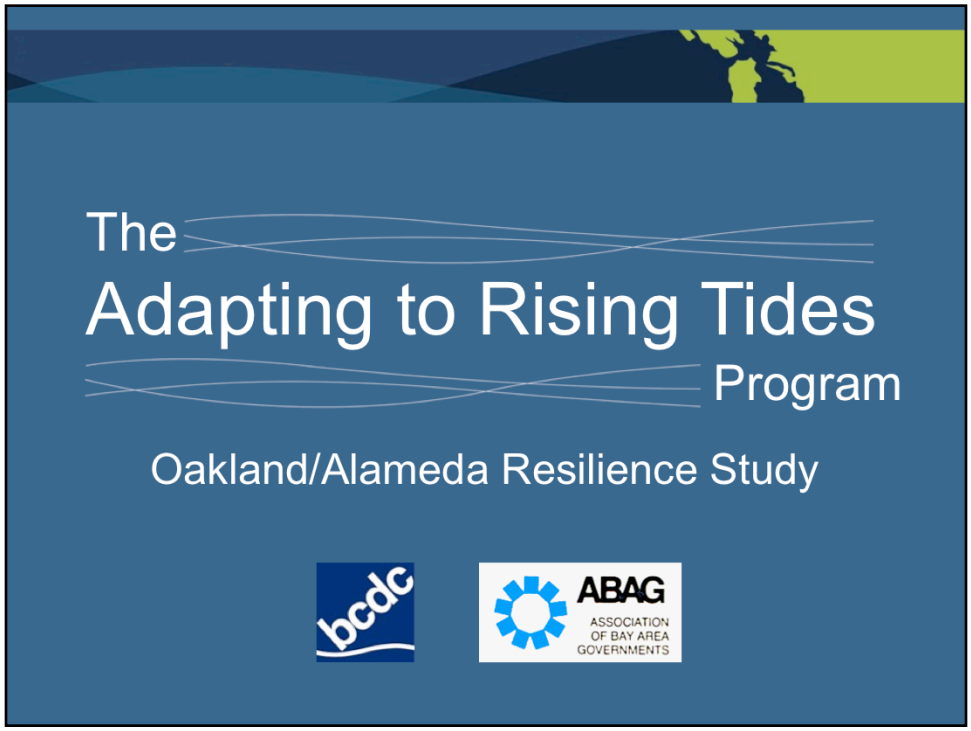


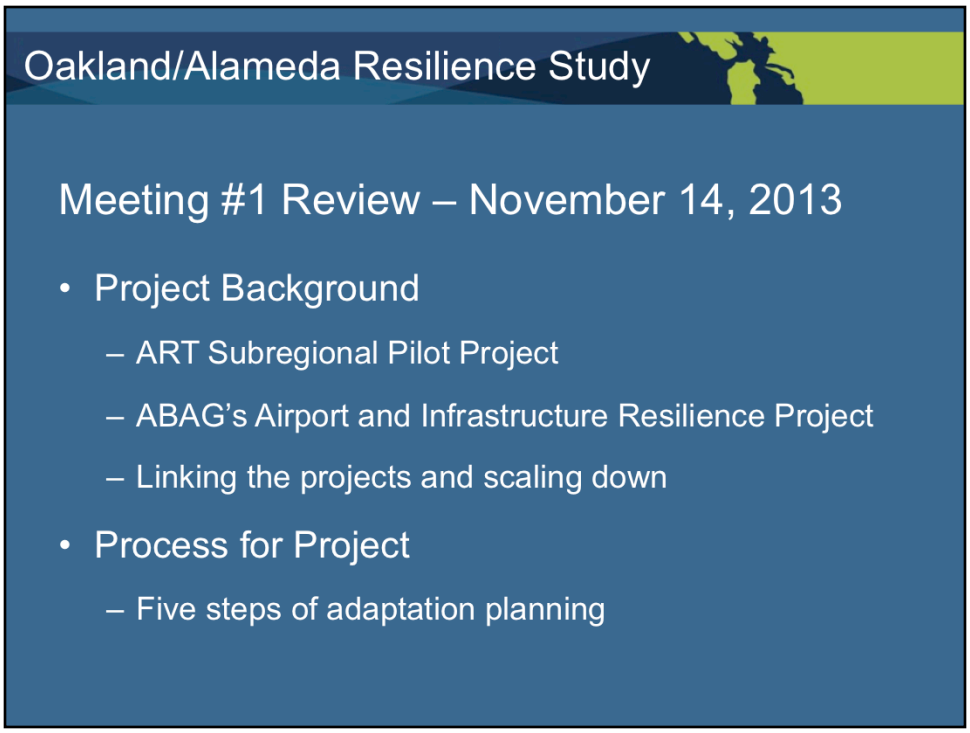
Adapting to Rising Tides project
www.adaptingtorisingtides.org

The ART program is leading, collaborating on, or supporting a number of related projects.

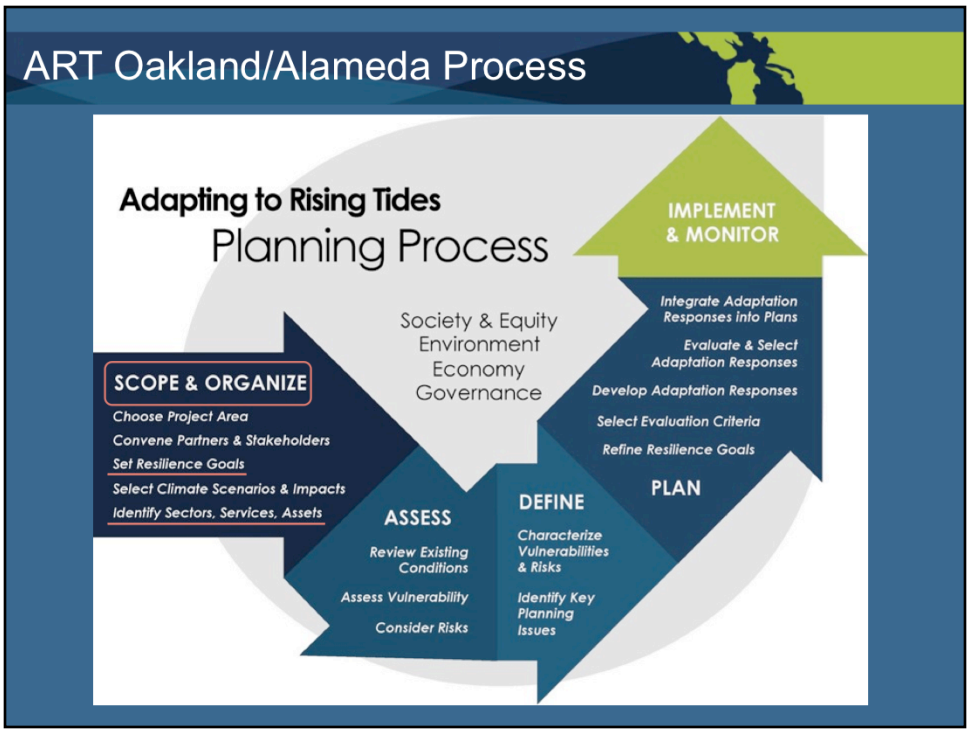
Oakland/Alameda Resilience Study

Meeting #2 Objectives – January 22, 2014

- Confirm initial resilience goals for project
- Begin Assess step
  - Vulnerability and Risk
  - Data collection
  - Relationships among assets



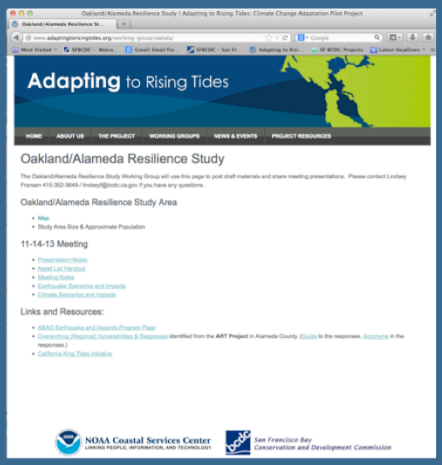
Last meeting was November 14, 2013. In that meeting, we introduced the two projects that form the background of this one, and discussed how those projects would be linked and scaled down to the Oakland / Alameda focus area. We also introduced the adaptation planning process that will be followed for this project.



In the last meeting, we went through the Scope & Organize step. We have some follow-up on two elements: assets and resilience goals

Updates

- Launched OAK/ALA Focus Area website
- Revised Asset List
- Drafted Resilience Goals
- Began compiling vulnerability and risk information for focus area



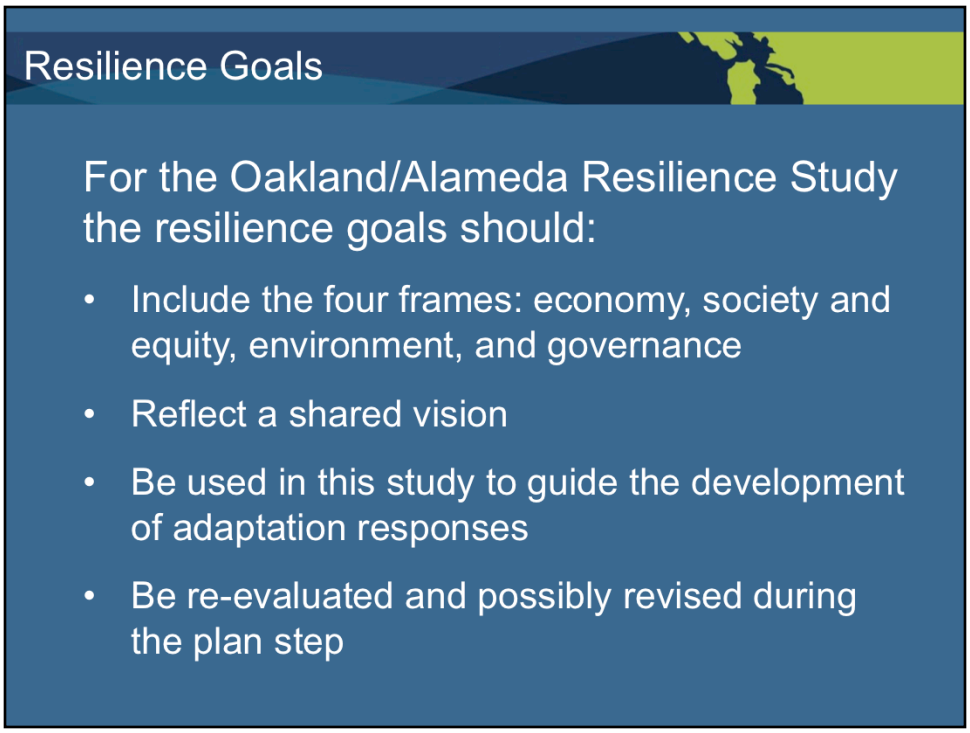
First, some updates on what the team has been working on since the November meeting.

Updates: Asset List

Different level of assessment for different assets

- Neighborhood scale questions
- Tiered / phased approach
  - Complex, locally or regionally significant, networked – more detailed
  - Less complex, not networked – general, representative, or taken up later

We have been revising our asset list since last meeting, based on suggestions from working group members and developing a 'tiered' approach to how we plan to conduct V&R assessment. Seeking to answer neighborhood scale questions; doing more detailed assessments than at the subregional scale, but not necessarily doing full assessments of every single asset in the focus area. Complex, locally or regionally significant, or networked assets will be analyzed in detail, while less complex, non-networked, or very numerous assets (e.g., schools) may be analyzed in less detail – we may do a general analysis, look at a few representative assets, or take assets up later as we learn more about their neighborhood. For the assets in the latter category, our assessments will evolve organically; there isn't a firm cutoff where we won't consider any more in greater detail, and if we learn something while analyzing another asset that indicates we need to take a closer look, we will do so. Some assets may get more attention during the Plan step when we're considering adaptation responses, as we may find that a response would affect an asset that wasn't previously analyzed in detail. We will put up a revised list of assets on the website soon for review, and we'll keep you posted in meetings going forward if there are any major changes to the assets we're examining.



These are the draft goals for this process - you should be able to see your own agency's mission in the goal but some parts of it/ them may be tangential to your goals. Goals can be specific or broad, near or long term.

Resilience Goals, Part II

Society & Equity	Economy	Environment	Governance
Access to jobs & services	Goods & cargo movement	Endangered species / habitat	Financial resources & staff
Transportation connectivity	Local economy supporting OAK	Lagoon & creek mgmt for species	Unified capacity to respond
Community cohesion	Employment center	Shoreline restoration	Upgrade utilities
Relationships and communications	Supply chain continuity		Assets relocated if necessary
Contingency plans	Entertainment		Maintain operability
Congestion, capacity	Business continuity		Contingency plans
Functioning infrastructure	Transportation continuity		Effective emergency command
Neighborhood	Critical infrastructure		Redundancy/backups
Strong CERT	Commercial transport		Safety
Outdoor recreation			Recover services
Safety			Emergency response
Food & water			

Summary list of concepts that came up in lightning round in last meeting, organized under the 4 frames

Resilience Goals, Part II

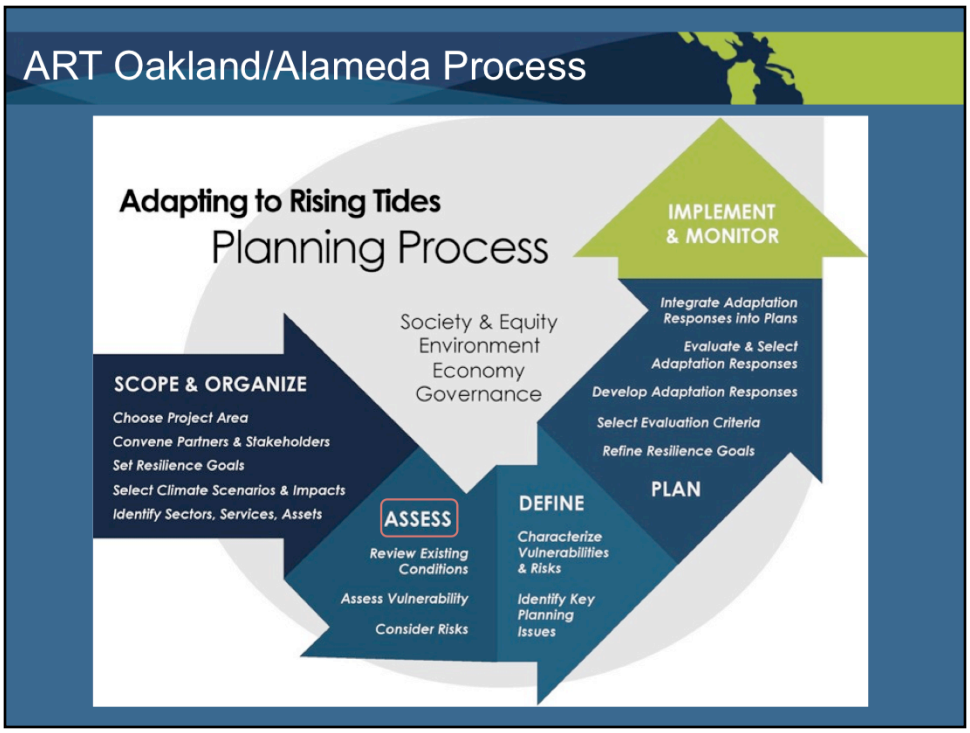
Discussion Questions

- Do you see your agency reflected in one or more of these goals?
- Do the goals adequately address the four frames (society & equity; environment; economy; governance)?

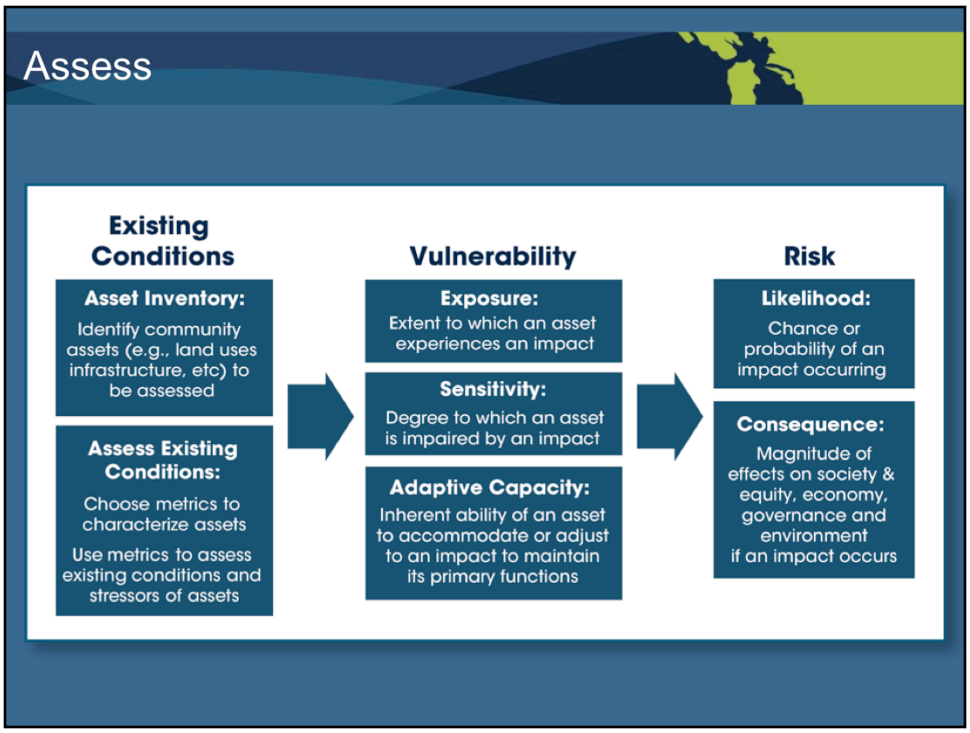
Resilience Goals, Part II

- Maintain neighborhood function by preserving access to roads and transit, goods and services, safe and affordable housing, and outdoor recreational opportunities.
- Maintain the function of the airport as a regionally significant passenger, cargo, and employment hub.
- Build resilience in all phases of the disaster lifecycle - from mitigation and preparedness to response and recovery - by protecting critical community facilities, supporting community awareness, ensuring assistance through mutual aid agreements, and building capacity for an effective recovery.
- Preserve environmental quality by protecting endangered species, ensuring good water quality, and providing appropriate wildlife habitat.
- Protect local and regional economy by preserving major employment centers, airport services, regionally significant transportation, and local infrastructure investments.

Draft resilience goals developed by BCDC and ABAG – any suggested revisions?



The rest of this meeting will focus on the Assess Step.



The Assess step includes assessing existing conditions, identifying vulnerabilities (which can be thought of as exposure, sensitivity, and adaptive capacity), and determining risks (in the case of the ART project, risk focused on the consequences of an impact occurring for the economy, environment, society, and governance structures.)

Assess

Metrics: Questions to ask yourselves, your agency, and your neighbors to assess vulnerability and risk and to inform adaptation responses

Existing Conditions

Vulnerabilities
- Information
- Governance
- Physical Qualities
- Functional Qualities

Consequences
- Society & Equity
- Environment
- Economy

This project will use a set of questions – or metrics – to identify vulnerabilities and risks for the various assets. These questions address existing conditions; four types ('classifications') of vulnerabilities, identified during the subregional project, and consequences for society and equity, environment, and economy.

Assess

Existing Conditions metrics describe the asset and highlight any current conditions or stressors that could affect its vulnerability to hazards. They could also help inform selection of adaptation responses.

Examples

Where is the asset located?

Who owns and who manages the asset?

How old is the asset and what is its remaining service life?

Assess

Information metrics help determine whether there are any ways in which an asset or asset category is vulnerable due to lacking, incomplete, or poorly coordinated information.

Examples

What types of information sources necessary to conduct a vulnerability and risk assessment are publicly available?

What types of mechanisms exist to share information between owners of connected or interdependent shoreline segments?

Assess

Governance metrics help determine whether an asset or asset category is vulnerable due to challenges with management, authority, regulation, or funding.

Examples

Is the asset protected from flooding by land or assets owned by other entities, or vice versa?

Are there existing funding sources that could be used to implement adaptation actions?

Assess

Physical characteristics metrics help determine whether an asset or asset category has vulnerabilities due to how or where an asset is designed or built.

Examples

Is the asset in an area of fill, loose or sandy soils, or a high water table that is at risk for liquefaction in an earthquake?

Are any components of the asset at-grade or below-grade? If so, are they sensitive to water or saltwater? Are they waterproof, corrosion-resistant, or otherwise protected?

Assess

Functional characteristics metrics help determine whether an asset or asset category is vulnerable due to its functions and relationships with other assets and asset categories.

Examples

Does the use of a property or facility make it particularly difficult to protect or evacuate, such as an elder care facility?

Is the system interconnected such that disruption of one can segment can affect the function of the entire system?

Assess

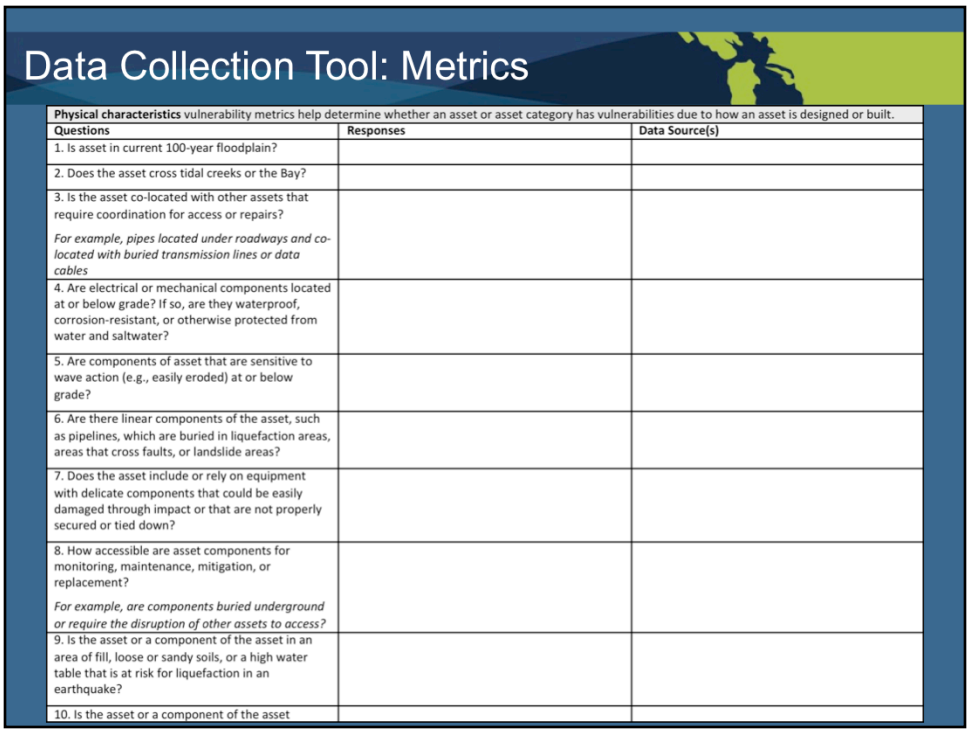
Consequences metrics help understand the potential consequences of a climate change impact for society, the economy, and the environment.

Examples

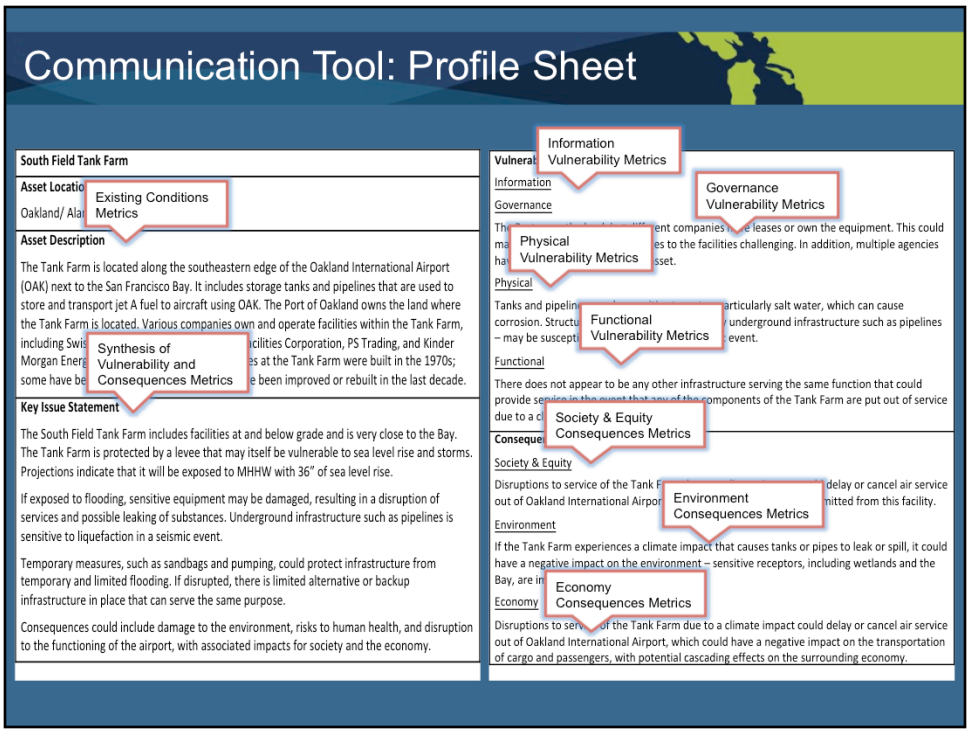
Does the asset serve vulnerable communities or critical facilities?

Are there any hazardous materials at the asset site that could pose a risk to the environment?

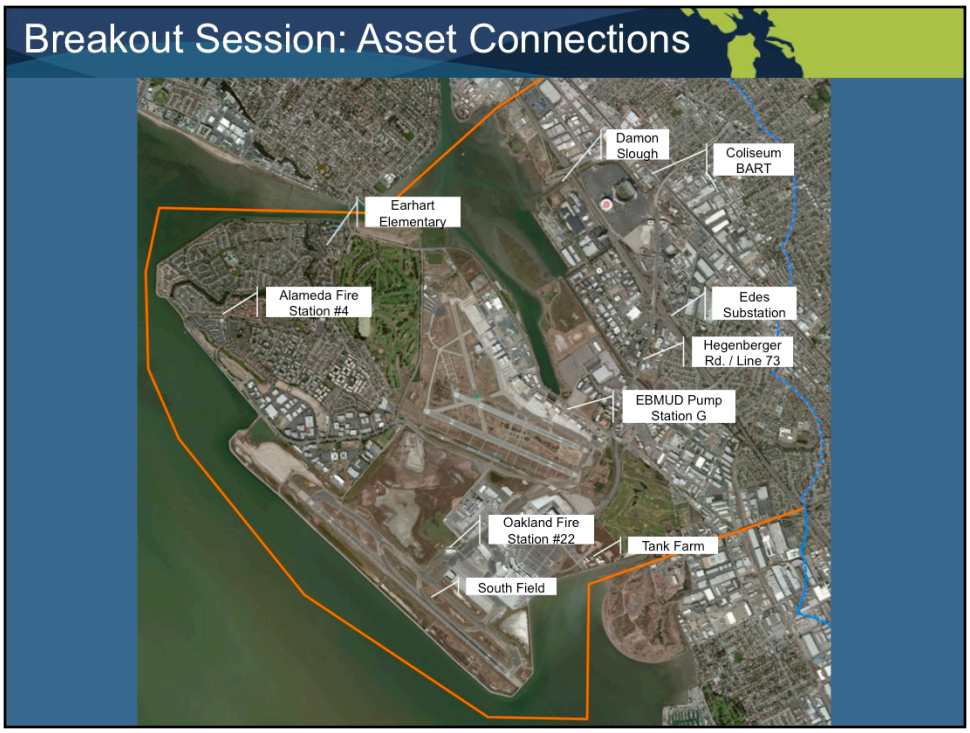
What is the value of the asset to the local economy?



BCDC and ABAG staff have begun gathering vulnerability and risk information for assets in the OAK/ALA focus area. They are using information found in the subregional study and ABAG's Airport and Infrastructure Resilience Project, and other publicly available information. Will need help from the working group to fill in gaps! The metrics tool looks like this.



Once the metrics are filled in for each asset, we will create a profile sheet, which summarizes the findings from the metrics. The profile sheet forms the base for developing adaptation responses and also serves as a communication tool. The 2nd page is most helpful in developing responses – by identifying types of vulnerabilities, it makes it easier to figure out what kinds of solutions would best address those vulnerabilities. The 1st page is more useful as a communication tool – it introduces the asset and synthesizes the vulnerabilities and risks so the reader can tell, at a glance, what the major issues are.



Map for breakout session – see handout.

Breakout session debrief

- What kinds of connections did you find among assets within the focus area?
- What kinds of connections did you find between assets in the focus area and assets outside of the focus area?
- Did connections make assets more or less vulnerable to sea level rise, storms, and earthquakes?
- What other factors make assets vulnerable (physical, functional, information, governance)?

Next Steps

Over the next few months we will:

- Use publicly available information to add detail to the metrics where possible
- Call or visit you to refine information in our metrics sheets
- Translate metrics into profile sheets
- When finalized, these sheets will become the common knowledge base for the plan step