



# California Water Foundation

An Initiative of the  
Resources Legacy Fund

# California Depends on Water

California's health and prosperity  
are fundamentally tied to water



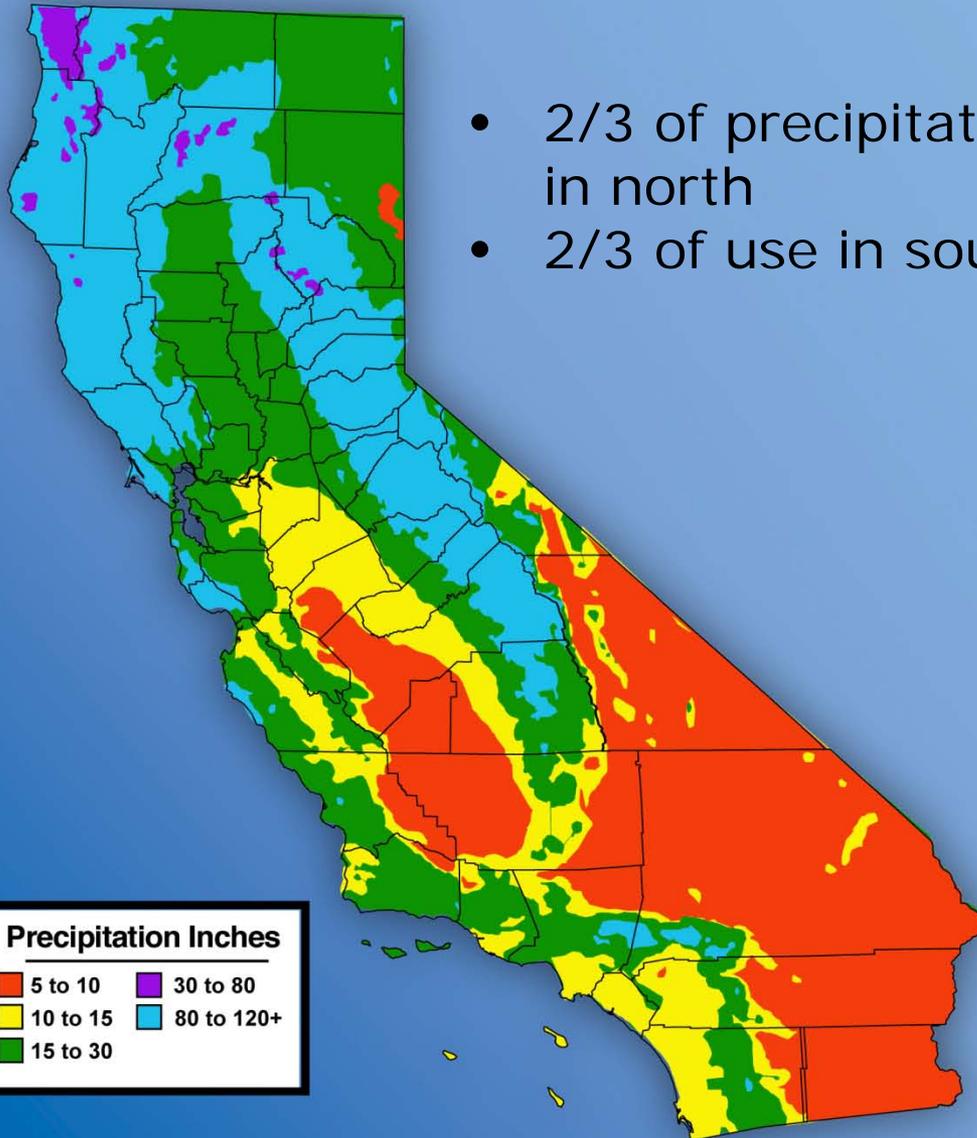
# California Water Development

- Water occurrence
- Project development
- Current water use & challenges
- Sustainable water resources management

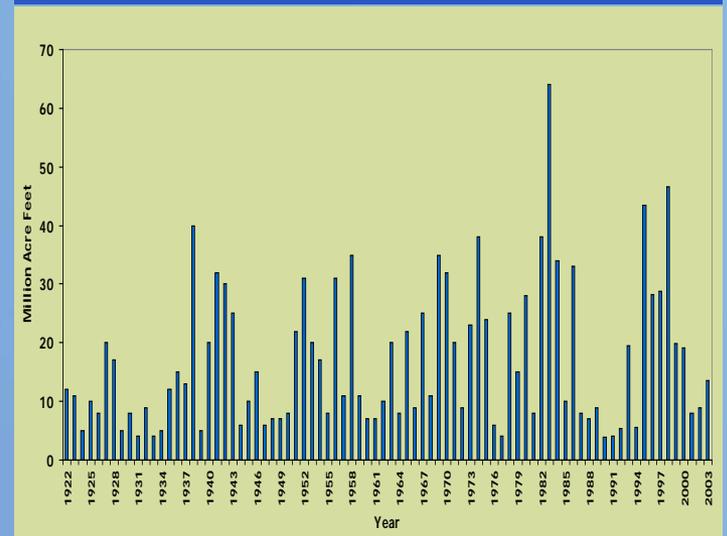


# Water Variability & Use

- 2/3 of precipitation in north
- 2/3 of use in south



*Yearly Total Delta Outflow*  
(Calendar Year)



Hetch Hetchy  
(1913)

Mokelumne  
Aqueduct (1929)

Central Valley

San Francisco

Angeles

San Diego

Colorado  
River  
Aqueduct  
(1932)

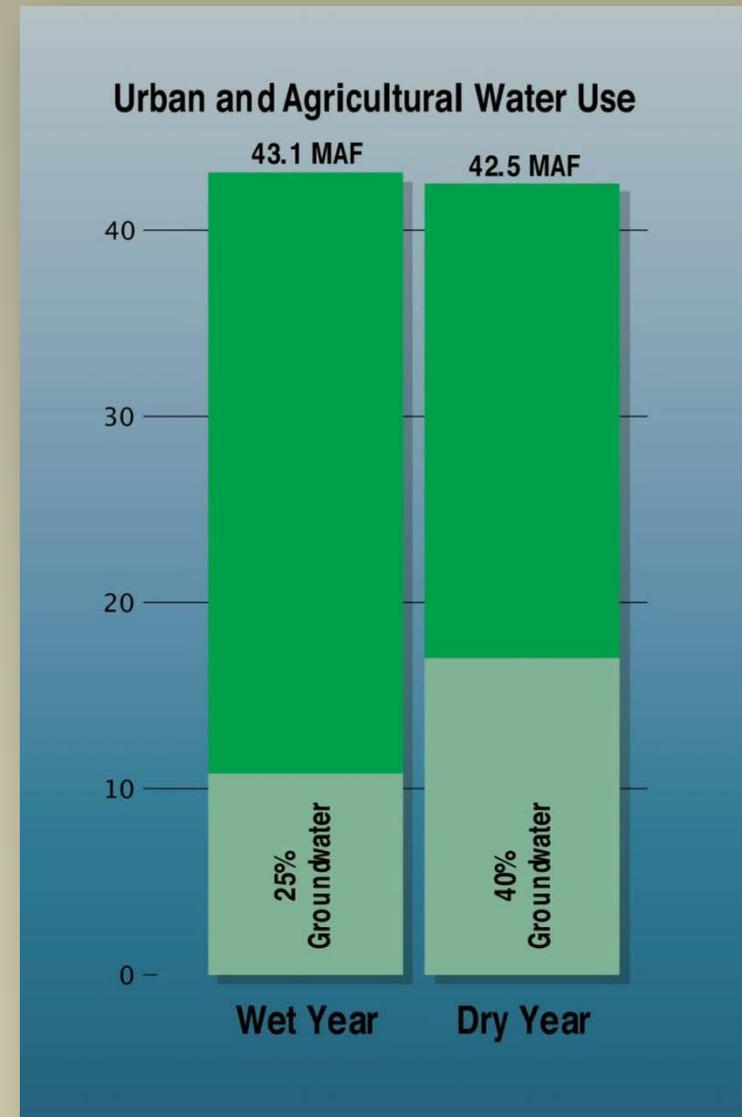
- ...intended consequences
- All are less reliable today

SWIFT WATER



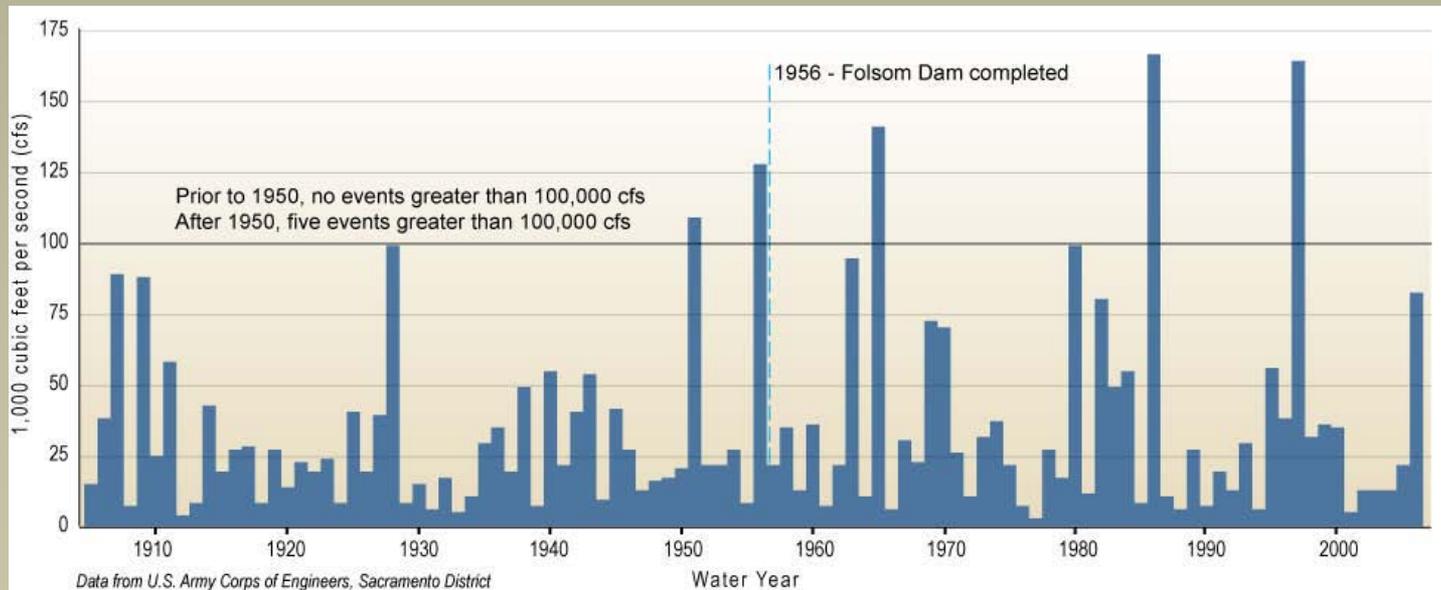
# California's Groundwater

- On average, about 1/3 of California's urban and agricultural water supply (14 million acre feet)
- Important source of dry year supply
- Average overdraft: 2-4 MAF
- Increased groundwater storage is essential to water supply reliability



# American River Runoff Annual Maximum 3-Day Flow

The five highest floods of record on the American River have occurred since 1950.



# Water System in Crisis

- Increasing population
- Aging infrastructure
- Groundwater overdraft
- Degraded ecosystems
- Increasing conflict
- Uncertainty due to climate change



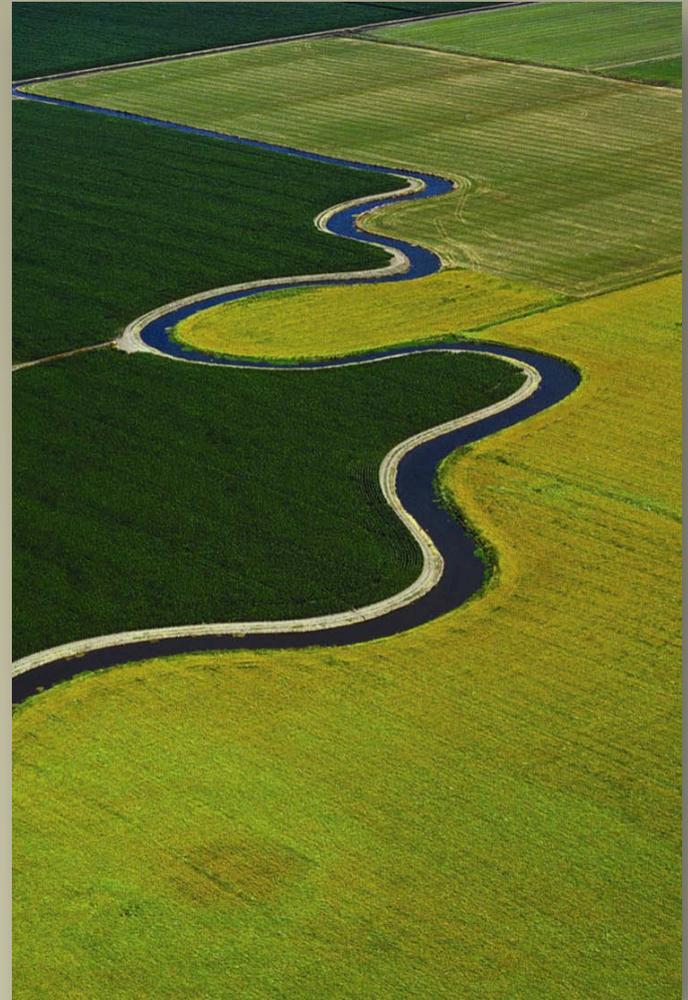
# Climate Change Impacts to California's Water Resources

- Diminishing snowpack (25-40% by 2050)
- More extreme weather patterns – droughts & floods
- Rising sea level
- Higher air/water temperatures
- Increased uncertainty



# Solving California's Water Crisis

- No single strategy can meet all needs
- Integrated, diverse strategies contribute to sustainable solutions
- Water management actions & issues are interconnected
- Manage water as a natural resource



# California Water Foundation Vision

*California's 21st century economic and ecological water needs are sustainably met*



# California Water Foundation

- 1. EFFICIENCY:** Make every drop of water count
- 2. GROUNDWATER:** Sustainably manage groundwater
- 3. RIVERS:** Protect and restore river systems
- 4. MANAGEMENT:** Create and sustain change



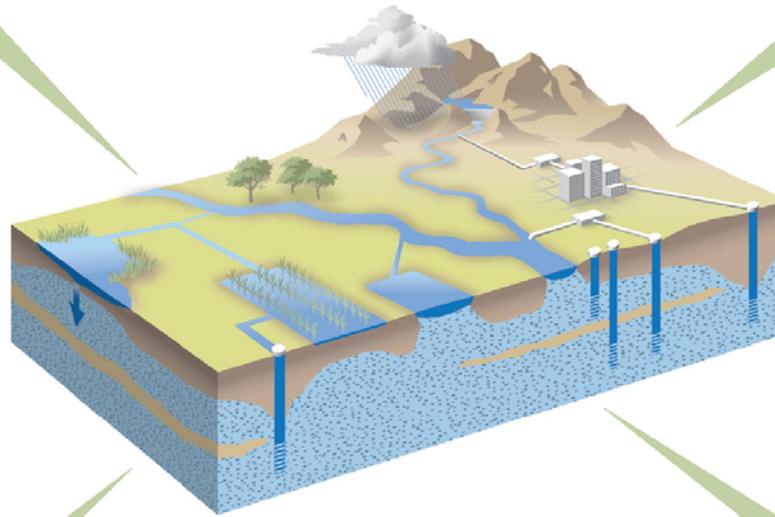
# Integrated Resource Management

## Increase Water Use Efficiency

- Exceed current urban conservation targets
- Increase agricultural water use efficiency
- Expand water recycling and stormwater capture opportunities
- Promote new regional water management strategies

## Improve Groundwater Management

- Reduce groundwater overdraft and increase recharge
- Increase data and monitoring of groundwater



## Strengthen Management Structures

- Build broad-based coalitions with vibrant leadership
- Support changes to laws, management, funding mechanisms, and institutions needed to maximize success of statewide strategies

## Restore Central Valley River Systems

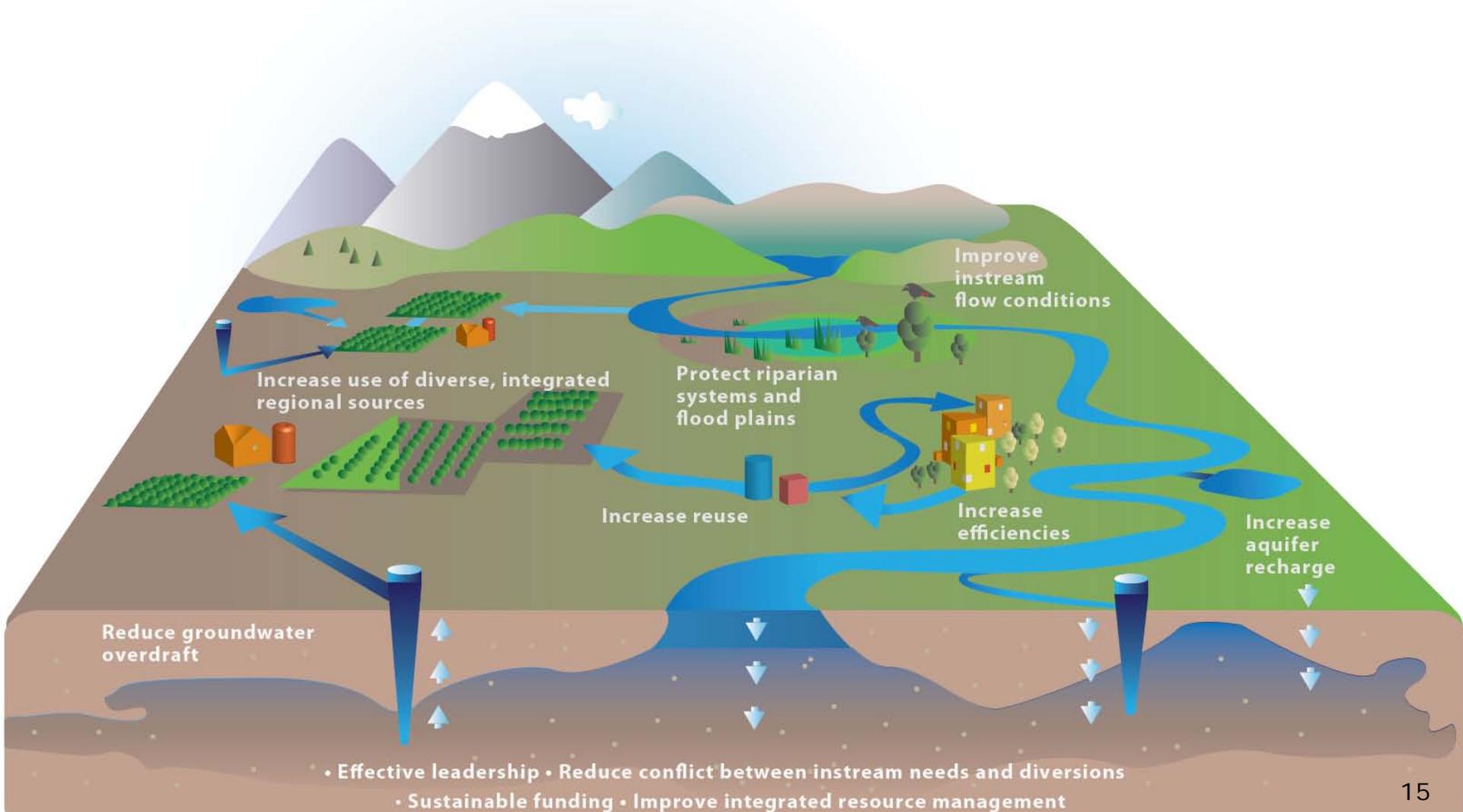
- Protect floodplains while improving flood protection and water supply
- Advance State policy of integrated flood management
- Integrate regional land use planning
- Reservoir re-operation

- Resilient ecosystems
- Diverse and adaptable water supply
- Meet current and future economic & ecosystem water needs



# Regional Sustainability Profile

## Sustainably Meeting California's 21st Century Economic and Ecological Water Needs



# Framework and composition of the sustainability profile

# Three potential approaches for applying the profile

## **Metric-driven**

Quantitative metrics regularly reported to align community around common vision and identify focus areas for improvement

## **Rubric-driven**

Common rubric applied to assess current state and help identify practices and tactics for improvement

## **Expert opinion**

Expert judgment applied (often using criteria or guiding principles) to inform discussion of current state and create pressure for change

The following pages provide examples of these approaches applied in a variety of contexts

## Example: Strive Together Report Card

Strive unites community leaders around shared issues, goals, measurements and results to improve student success

### Framework

#### Goal 2, 3 & 4: Every student will be SUPPORTED, SUCCEED academically and ENROLL in college

##### Cincinnati Public Schools

	Current average	Current benchmark	Change since recent year	Change since baseline year
4th grade reading	62%	75%		
8th grade reading	57%	79%		
4th grade math	57%	74%		
8th grade math	52%	58%		
Graduation	83%	95%		
ACT composite	18.9		↓ 0.1 pt.	↓ 0.8 pt.
College enrollment	68%	70%		

##### Covington Independent Schools

	Current average	Current benchmark	Change since recent year	Change since baseline year
4th grade reading	66%	61%		
8th grade reading	37%	59%		
4th grade math	62%	42%		
8th grade math	22%	37%		
Graduation	84%			
ACT composite	16.9		↓ 0.9 pt.	↓ 1.3 pt.
College enrollment	55%			

### Method

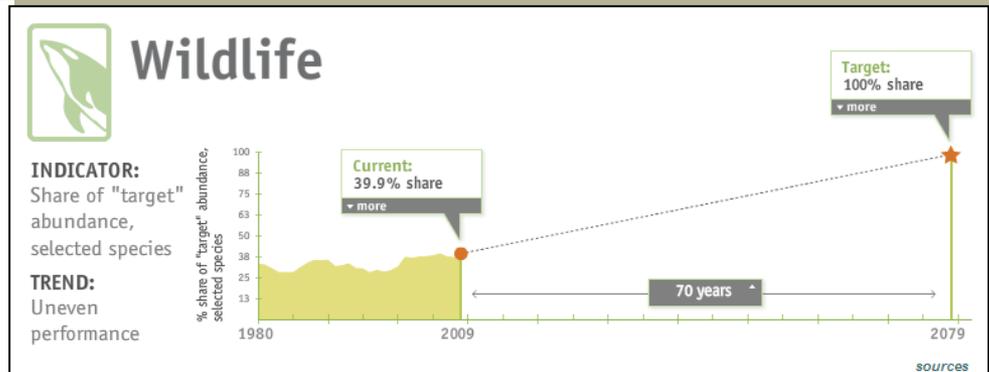
- Driven by the *Student 's Roadmap to Success* and mapped to Strive's five goals
- Community selects quantitative metrics aligned with the Roadmap to Success and sets agenda for collective action
- Report card captures third-party metrics and reports them annually, comparing each to a benchmark or national norm and describing trends
- Qualitative metrics are not combined into an overall assessment

## Example: Cascadia Scorecard

The Sightline Institute tracks progress on Pacific Northwest's sustainability goals: long and healthy lives; shared economic prosperity; and a legacy of thriving nature

### Framework

#### Scorecard Summaries



### Method

- Uses a single proxy indicator or simple composite to measure progress in each of seven sectors
- Data is reported annually as a trend and compared to a selected benchmark (the "Scorecard model")
- Given the trend, reports the number of years until the benchmark is achieved in each sector and compares across sectors
- Each sector's number of years is averaged to give an overall score for the region

## Example: GRId Governance Risk Assessment

RiskMetrics developed GRId as a benchmark of the potential risks stemming from companies' governance practices

### Framework

Board Structure <span style="color: blue;">●</span> <span style="color: orange;">●</span> <span style="color: red;">●</span> MEDIUM CONCERN		Compensation <span style="color: blue;">●</span> <span style="color: orange;">●</span> <span style="color: red;">●</span> LOW CONCERN	
Factor	Impact	Factor	Impact
73.33% of the board is independent	←	The minimum vesting periods mandated in the plan documents, adopted/amended in the last 3 years, for executives' restricted stock is 36 months	←
83.33% of the nominating committee is independent	←	The company has not repriced options or exchanged them for shares, options or cash without shareholder approval in the last 3 years	←
100% of the compensation committee is independent	←	There are no change in control agreements for named executive officers	←
100% of the audit committee is independent	←	There are no NEOs that receive tax gross-ups on their perks other than relocation and other broad-based benefits	←
There were no directors that attended less than 75% of the board meetings without a valid excuse	←	All directors with one or more years of service own stock	←
The company discloses board/governance guidelines	←	There are no NEOs eligible for multi-year guaranteed bonuses	■
6.67% of directors were involved in material RPTs	■	The company does not provide excise tax gross-ups for change in control payments	■
The company has a majority vote standard without a director resignation policy	■		
The number of directors who received withhold/against votes of 50% or greater at the last annual meeting was not disclosed	→		
The Chairman of the board is an executive director	→		

### Method

- Combines qualitative and quantitative data
- Questions for each category scored on a scale of -5 to 5 (informed by underlying data elements)
- Rubric and weighting of scores vary to account for relative importance and market differences
- Scores are normalized and combined to translate into an overall assessment of the governance concern (high, medium, low)

# Option 3: Expert opinion (single expert)

## Example: Consumer Reports ratings of HD TVs

Consumer Reports works for a fair, just, and safe marketplace for all consumers

### Framework

Brand and model	Price	Overall score	Test results					Features					
Small type: similar model(s) ★ indicates a Quick Pick meriting first consideration. CR Best Buy indicates an exceptional value.			HD picture quality	DVD picture quality	S-video picture quality	Ant/cable picture quality	Sound quality	Ease of use	Flat-front screen	Composite-video inputs	S-video in (rear/front)	Component-video inputs	Front-panel A/V inputs
			●	●	●	●	●	●	●	●	●	●	●
<b>34-INCH WIDE-SCREEN HIGH-DEFINITION MODELS</b>													
<b>Sony</b> FD Trinitron Wega HDTV KD-34XBR960	\$1900	70	●	●	●	●	○	○	●	3	2/1	2	●
<b>Sony</b> FD Trinitron Wega Hi-Scan KD-34XS955	\$1550	70	●	●	●	●	○	○	●	3	2/1	2	●
<b>Sony</b> FD Trinitron Wega Hi-Scan KV-34HS420	\$1200	68	●	●	●	●	○	○	●	3	2/1	2	●
<b>Toshiba</b> TheaterWide HD 34HF85	\$1000	32	●	●	●	●	○	○	●	2	2/1	2	●

### Method

- Qualitative assessment of product performance on a number of dimensions, scored on a set rubric and combined into an overall assessment
- All assessments are conducted by testing experts and informed by standards the individual expert thinks should apply

# Comparison of approaches

Approach	Roles		Output	Impact	Source of legitimacy
	Organizer	Community			
<b>Metric-driven</b>	Facilitates initial indicator selection and publishes report card	Analyzes report card results, sets future goals, and aligns priorities for collective action	Objective assessment of current state	Community aligned around a common vision and can identify areas to focus collective action	Quantitative measurement with third-party data collection
<b>Rubric-driven</b>	Defines rubric and ensures accurate implementation	Submits relevant data for analysis. Could use for self-assessment	Judgment relative to benchmarks or other communities	Communities and interested outsiders assess current state and can identify approaches to improvement	Transparency and consistency of the process and based in sound research or a logical/scientific basis
<b>Expert opinion</b>	Facilitates expert input and defines assessment dimensions	Analyzes results and uses them to inform future action	Expert perspective on current state	Expert opinion informs discussion of current state and creates pressure for change	Expert credibility and impartiality

# Framework and composition of the sustainability profile

- Expert interviews conducted
- Initial Framing for discussion

<p><b>1. Supply Reliability</b></p> <ul style="list-style-type: none"><li>a. Diversity &amp; resilience of supply sources</li><li>b. Risk of judicial and regulatory conflict</li><li>c. Reserve sufficiency</li><li>d. Emergency preparedness</li></ul>	<p><b>2. Demand Management</b></p> <ul style="list-style-type: none"><li>a. Conservation planning</li><li>b. Supply and demand balance</li><li>c. Land use planning integration</li><li>d. Water use development standards</li></ul>
<p><b>3. Ecosystem Stewardship</b></p> <ul style="list-style-type: none"><li>a. Source watershed protection</li><li>b. Habitat conservation</li><li>c. <i>In-stream conditions</i></li><li>d. <i>Water quality</i></li></ul>	<p><b>4. Adaptive Management</b></p> <ul style="list-style-type: none"><li>a. Integrated resource management</li><li>b. Financial strategy</li><li>c. <i>Climate adaptation planning</i></li></ul>

# Regional Sustainability Profile

## Sustainably Meeting California's 21st Century Economic and Ecological Water Needs

