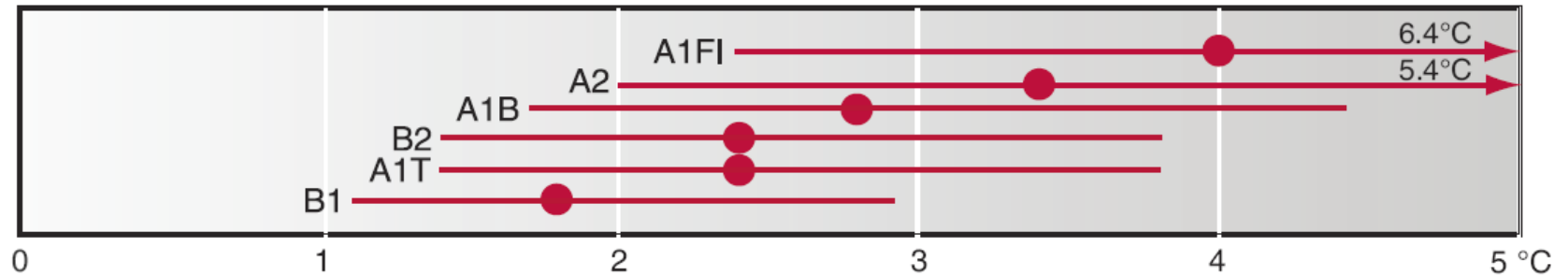


Motivating Local Action on Climate Change



Dr. Rosalind Bark, University of Arizona and the Sonoran Institute
Rocky Mountain Land Use Institute 18th Annual Land Use Conference
Sustainability: beyond the platitudes
University of Denver, Sturm College of Law
March 6, 2009

*“Owing to past neglect, in the face of the plainest warnings,
we have now entered upon a period of danger....
The era of procrastination, of half-measures, of soothing and
baffling expedients, of delays, is coming to its close.
In its place we are entering a period of consequences.....
We cannot avoid this period; we are in it now”*

Mitigation vs. adaptation

Adaptation and mitigation

**Scenarios for GHG emissions from 2000 to 2100 (in the absence of additional climate policies)
and projections of surface temperatures**

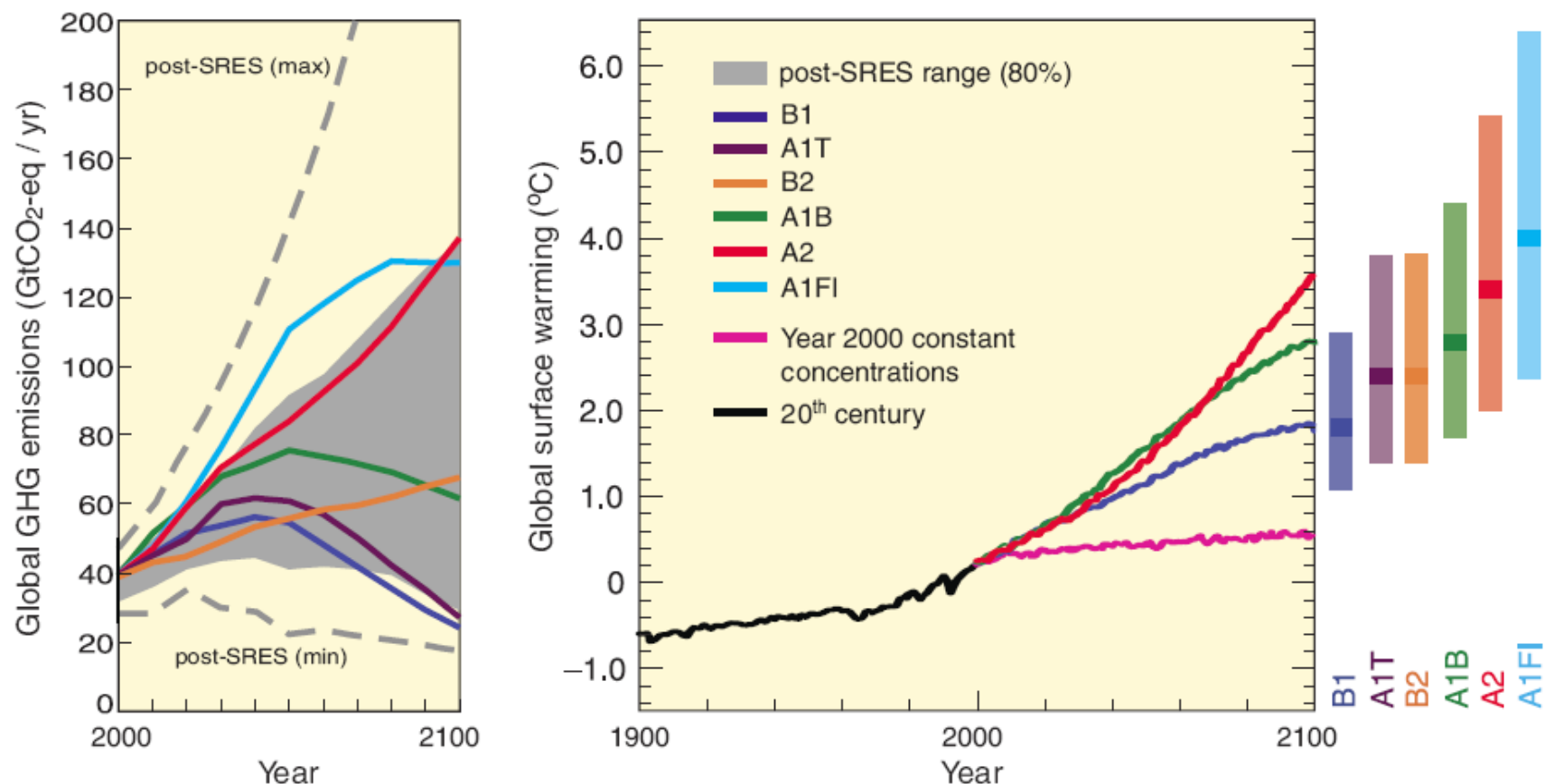
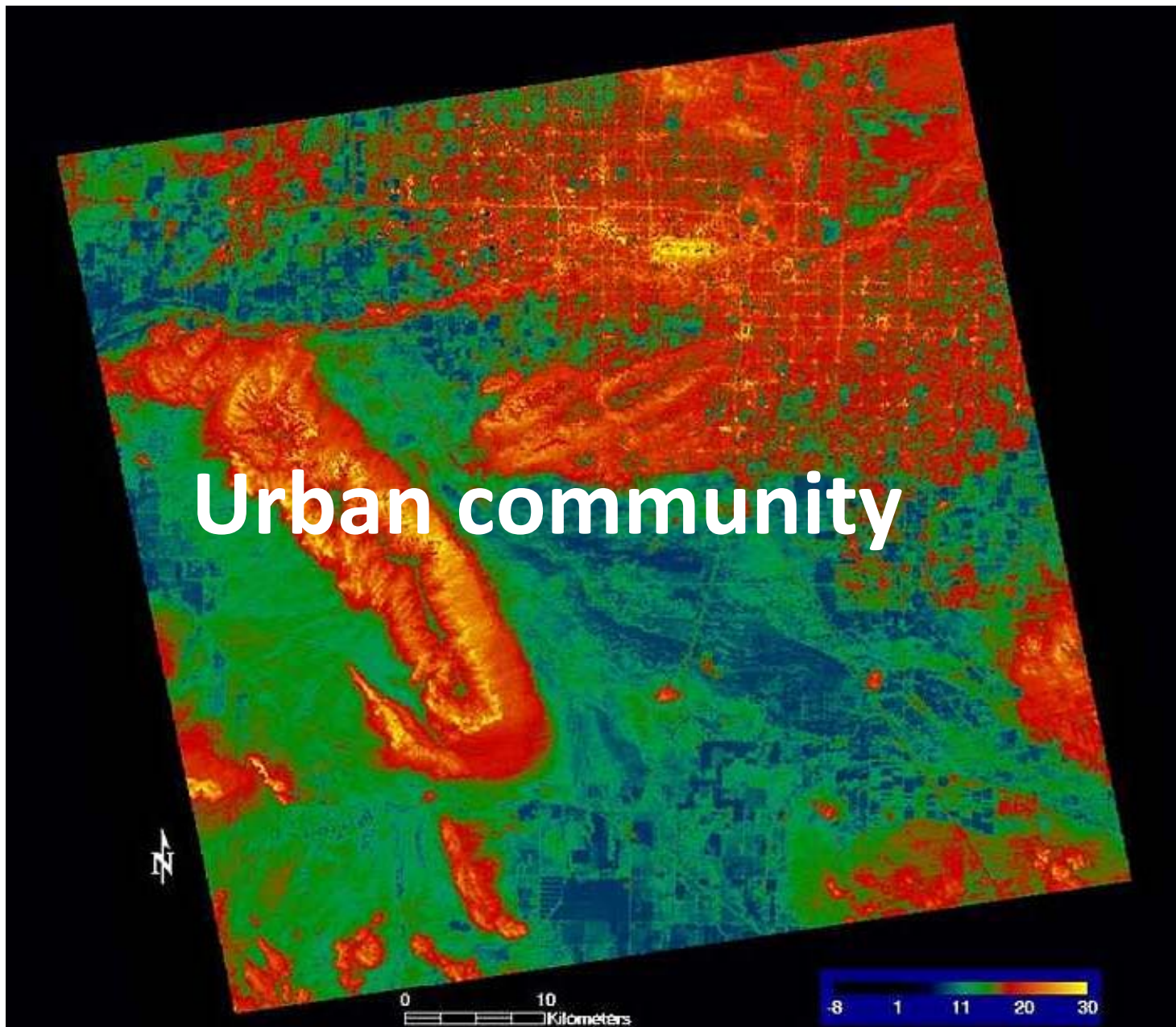


Figure SPM.5. Left Panel: Global GHG emissions (in GtCO₂-eq) in the absence of climate policies: six illustrative SRES marker scenarios (coloured lines) and the 80th percentile range of recent scenarios published since SRES (post-SRES) (gray shaded area). Dashed lines show the full range of post-SRES scenarios. The emissions include CO₂, CH₄, N₂O and F-gases. **Right Panel:** Solid lines are multi-model global averages of surface warming for scenarios A2, A1B and B1, shown as continuations of the 20th-century simulations. These projections also take into account emissions of short-lived GHGs and aerosols. The pink line is not a scenario, but is for Atmosphere-Ocean General Circulation Model (AOGCM) simulations where atmospheric concentrations are held constant at year 2000 values. The bars at the right of the figure indicate the best estimate (solid line within each bar) and the likely range assessed for the six SRES marker scenarios at 2090-2099. All temperatures are relative to the period 1980-1999. {Figures 3.1 and 3.2}

North America

- Warming in western mountains is projected to cause decreased snowpack, more winter flooding and reduced summer flows, exacerbating competition for over-allocated water resources
- In the early decades of the century, moderate climate change is projected to increase aggregate yields of rain-fed agriculture by 5 to 20%, but with important variability among regions. Major challenges are projected for crops that are near the warm end of their suitable range or which depend on highly utilised water resources.
- Cities that currently experience heat waves are expected to be further challenged by an increased number, intensity and duration of heat waves during the course of the century, with potential for adverse health impacts
- Coastal communities and habitats will be increasingly stressed by climate change impacts interacting with development and pollution.

Urban community



P.L. 111-5

One Hundred Eleventh Congress
of the
United States of America

AT THE FIRST SESSION

*Begun and held at the City of Washington on Tuesday,
the sixth day of January, two thousand and nine*

An Act

Making supplemental appropriations for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization, for the fiscal year ending September 30, 2009, and for other purposes.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE.

This Act may be cited as the “American Recovery and Reinvestment Act of 2009”.



Stimulus Funding Updates

Energy Efficiency and Conservation Block Grants

The EECBG received a total of \$3.2 billion in funding, with \$2.8 billion to be distributed by formula to states, eligible local governments, and Indian tribes. Apply now! This summary includes step-by-step instructions.

[>> Learn More](#)

State Energy Programs

State Energy Programs will receive \$3.1 billion of funding to further renewable energy and energy efficiency technologies. States may provide money to local governments for local renewable and efficiency projects.

[>> Learn More](#)

Weatherization Assistance Program

WAP received \$5 billion for the installation of energy efficiency measures in low-income households. Expansion of this program can help local governments reduced their community-wide greenhouse gas emissions, so it will be important to get the word out to community members. Find out how to help them apply.

[>> Learn More](#)

EPA and Department of Labor Green Funding Opportunities

The EPA has received \$300 million to implement the Diesel Emission Reduction Act, and the Department of Labor has received \$750 million for a program of competitive grants for worker training and placement in high growth and emerging industry sectors. Of that \$750 million, approximately \$500 million is to be made available for job training projects that prepare workers for careers in energy efficiency and renewable energy.

ICLEI Tools and Resources

Guidelines to incorporate ICLEI tools and resources into your stimulus preparations.

>> Coming Soon!

Alternative Fuel Vehicles Pilot Grant Program (DOE Clean Cities Program)

The Clean Cities Program received \$300 million, which will help acquire motor vehicles with a higher fuel economy, including hybrid vehicles, electric vehicles, commercially available plug-in hybrid vehicles and the necessary infrastructure. Apply now for a grant.

[>> Learn More](#)

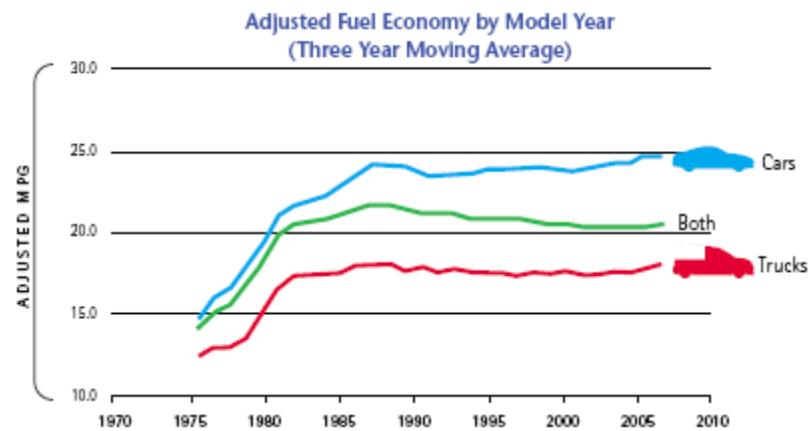
Transportation Electrification

Four hundred million is included for Transportation electrification. This will be distributed as grants that either encourage the use of plug-in electric drive vehicles or for projects that implement electric transportation technologies that would significantly reduce greenhouse gas emissions and the use of petroleum.

Energy Office Initiative

ICLEI's new Local Government Energy Office Initiative will help local governments open an energy office and institutionalize their energy and climate work. A full-time position, among other duties, would coordinate energy programs funded by federal stimulus dollars.

[>> Learn More](#)



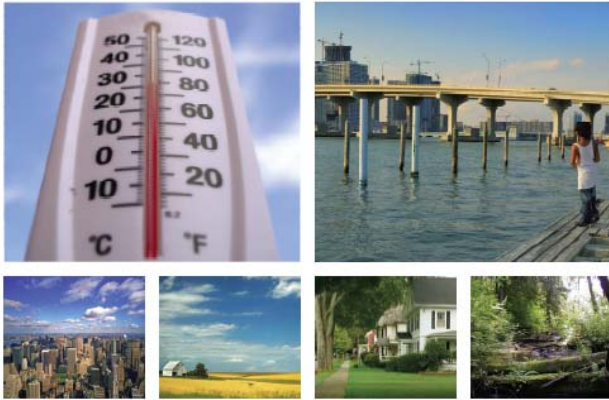
**CLEAN AIR
MAKE
MORE**

CLIMATE CHANGE

- o Land use planning for a sustainable future, smart growth
- o Building codes (commercial, government, education, and private): LEED
- o (Regional) water planning for supply reliability and reuse
- o Transportation: air quality, infrastructure design, commuter/airport links
- o Health impact planning
- o Conservation plans and landscape ordinances

PREPARING FOR CLIMATE CHANGE

A Guidebook for Local, Regional,
and State Governments



Written by
Center for Science in the Earth System (The Climate Impacts Group)
Joint Institute for the Study of the Atmosphere and Ocean
University of Washington
King County, Washington
With an Introduction by King County Executive Ron Sims



The Climate Resilient Communities™ Program

Five Milestone Methodology

1. Conduct a Climate Resiliency Study
2. Prioritize Areas for Action and Set Goals
3. Develop a Climate Resilient Action Plan
4. Implement the Plan
5. Monitor and Reevaluate

ALBUQUERQUEGREEN

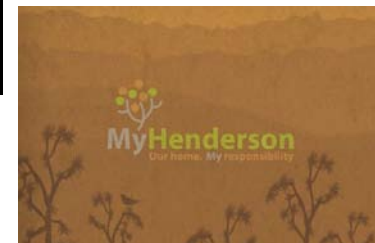


1990 & 2005
Greenhouse Gas Inventory

Phoenix: A Sustainable City
protecting the environment today for a healthy tomorrow



CITY OF
BOZEMAN
THE MOST LIVABLE PLACE



SALT LAKE CITY GREEN

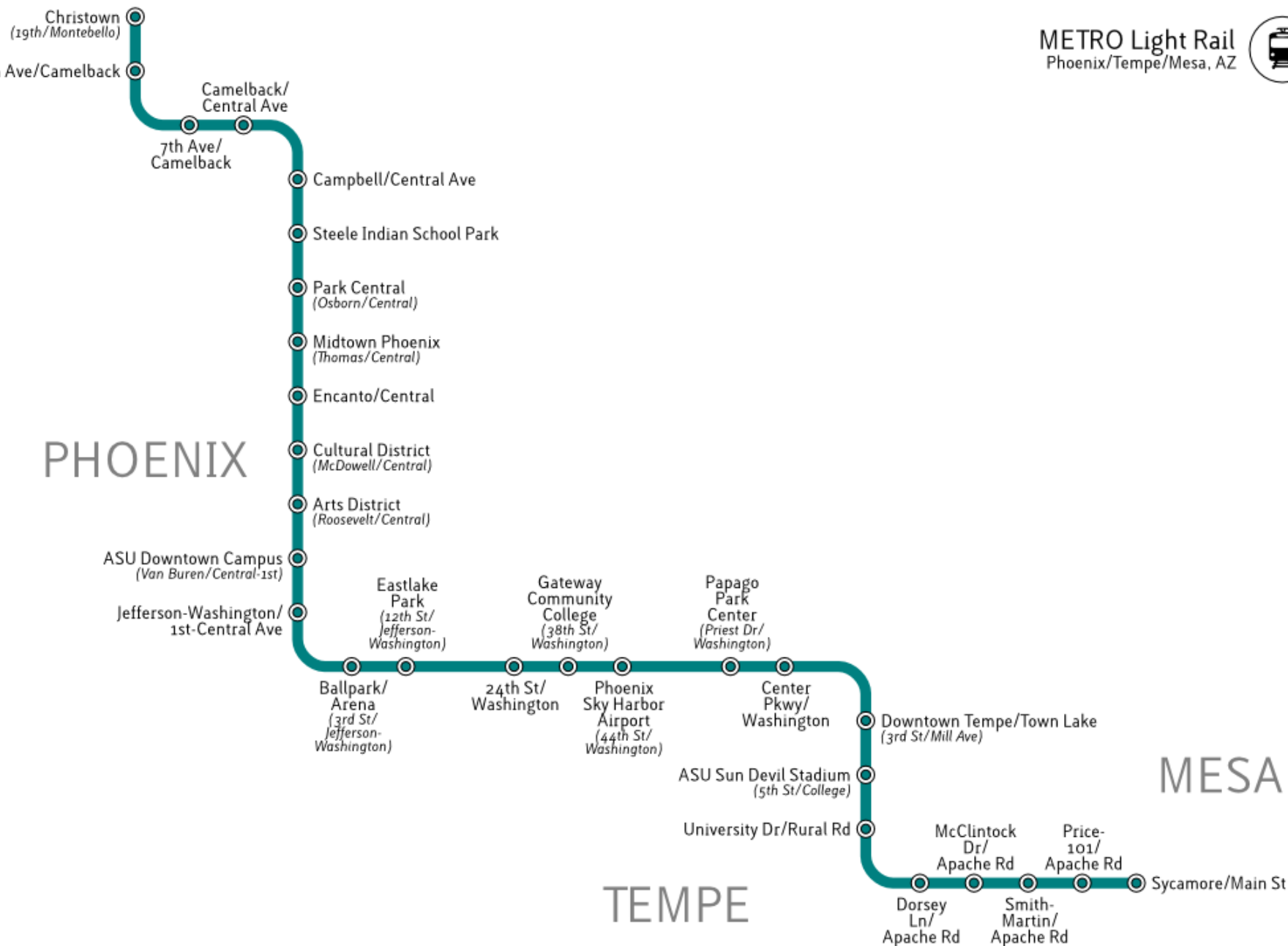
METRO Light Rail
Phoenix/Tempe/Mesa, AZ



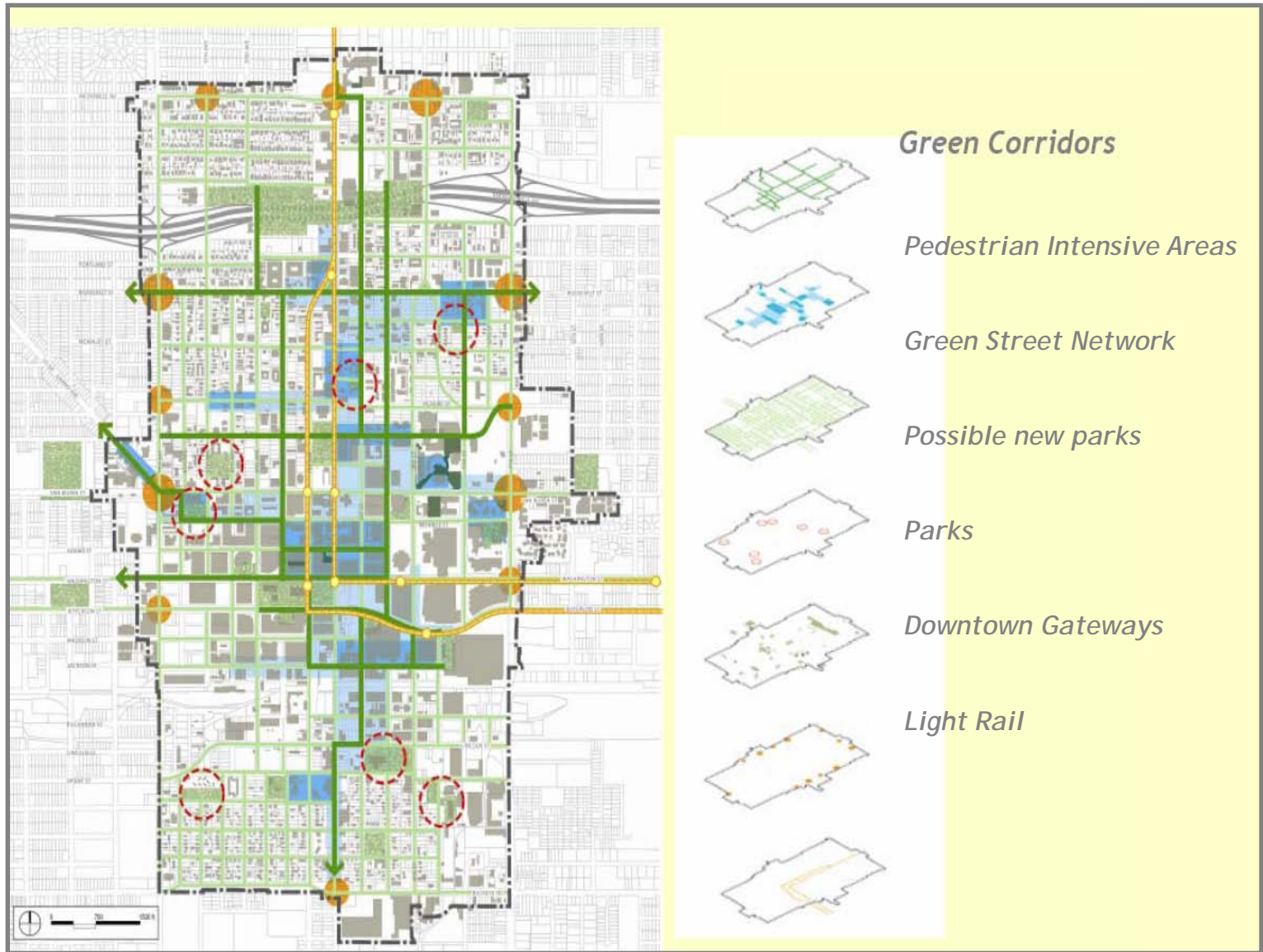
PHOENIX

MESA

TEMPE



Downtown Phoenix: The Connected Oasis





▼ Landscape Rebate

[Enroll Online](#)[Frequent Questions](#)[Program Conditions](#)[Commercial/Multifamily](#)[Resources - Preconversion](#)[Resources - Postconversion](#)[Xeriscape Study](#)[► Rebate Coupons](#)[► Car Wash Coupons](#)[► Conservation Tips](#)[► Pools & Spas](#)[► Indoor Water Audit Kit](#)[► Water Smart Art](#)[► Commercial Programs](#)[► Conservation Coalition](#)[► Restaurants](#)[► Water Efficient Technologies](#)[► Water Smart Home](#)[► Conservation Plan](#)[► Helpline](#)[► Interest Form - Homeowners](#)[► Interest Form - Commercial](#)

Terms of the Rebate

SNWA's assurance

This agreement expires in six calendar months. The six-month term begins the day after SNWA approves the agreement and ends at 5 p.m. on the first business day after six calendar months have elapsed. Once you notify SNWA of completion, any wait for a final inspection is not counted against your six-month term. Only one payment may be received under this agreement: future conversions require a new application.

Incentive amounts and limits

\$1.50 per square foot for the first 5,000 square feet and \$1 per square foot thereafter, not to exceed \$300,000 of approved payments per fiscal year. Limitations are per property, per owner, per SNWA fiscal year (July 1 through June 30). Checks are issued to property owners or their legally-appointed agent. Well users' rebates are limited to 2,500 square feet per fiscal year. The SNWA may limit new agreements to manage program costs.

Final Inspection

After notification of the project's completion, SNWA will conduct an inspection to verify program compliance. If the conversion fails inspection, you will be allowed 60 days or the remainder of the six-month period, whichever is greater, to fully comply with the program conditions.

Requirement to sustain the conversion

The converted area must remain in compliance with all program conditions for a period of 10 years. This requirement is void upon transfer of ownership. You may be required to refund some or the entire rebate if this requirement is violated.

Other responsibilities of the applicant

SNWA enforces only the conditions of this agreement. The applicant is responsible for complying with all laws, policies, codes and covenants that may apply. Quality and appearance of the conversion is the responsibility of the applicant. Rebates may be considered taxable income.

Drought Status



ALERT

[More »](#)

Cancel

☐ I agree

Next



Amenity community





111TH CONGRESS
1ST SESSION

S. 313

To resolve water rights claims of the White Mountain Apache Tribe in the State of Arizona, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JANUARY 26, 2009

Mr. KYL introduced the following bill; which was read twice and referred to the Committee on Indian Affairs

SEC 16 (e) Sunrise Ski Park Snow-Making Infrastructure - \$25 million

\$19.77 million expansion and snowmaking infrastructure

FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NAVAJO NATION; HAVASUPAI TRIBE;
REX TILOUSI; DIANNA UQUALLA;
SIERRA CLUB; WHITE MOUNTAIN
APACHE NATION; YAVAPAI-APACHE
NATION; THE FLAGSTAFF ACTIVIST
NETWORK,

Plaintiffs-Appellants,
and

HUALAPAI TRIBE; NORRIS NEZ; BILL
BUCKY PRESTON; HOPI TRIBE;
CENTER FOR BIOLOGICAL DIVERSITY,
Plaintiffs,

v.

UNITED STATES FOREST SERVICE;
NORA RASURE, in her official
capacity as Forest Supervisor,
Responsible Officer, Coconino
National Forest; HARV FORSGREN,
appeal deciding office, Regional
Forester, in his official capacity,
Defendants-Appellees,
ARIZONA SNOWBOWL RESORT
LIMITED PARTNERSHIP,
Defendant-intervenor-Appellee.

Filed October 17, 2007

No. 06-15371

D.C. Nos.

CV-05-01824-PGR
CV-05-01914-PGR
CV-05-01949-PGR
CV-05-01966-PGR

A photograph of a rural landscape. The foreground is a vast, flat, light-brown field. In the middle ground, there is a small cluster of buildings, possibly a farm or a small village, surrounded by some trees. The background shows rolling hills under a blue sky with scattered white clouds.

Rural community



BROWNOUTS IN CALIFORNIA

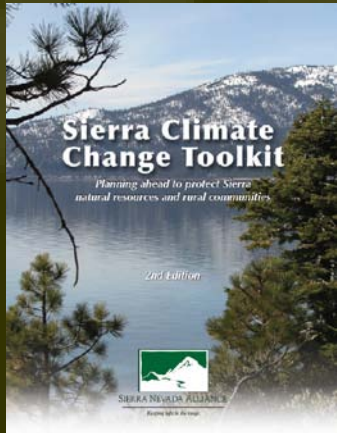
BROWN FIELDS IN IDAHO

Native Americans

Farmers



Rural dwellers



**Build capacity
Access information
Land use planning
Resource planning
Indigenous
knowledge**



Forest resources

Ranchers



“adaptation measures are seldom undertaken in response to climate change alone”

Table SPM.4. Selected examples of planned adaptation by sector. (Table 4.1)

Sector	Adaptation option/strategy	Underlying policy framework	Key constraints and opportunities to implementation (Normal font = constraints; <i>italics</i> = opportunities)
Water	Expanded rainwater harvesting; water storage and conservation techniques; water re-use; desalination; water-use and irrigation efficiency	National water policies and integrated water resources management; water-related hazards management	Financial, human resources and physical barriers; <i>integrated water resources management; synergies with other sectors</i>
Agriculture	Adjustment of planting dates and crop variety; crop relocation; improved land management, e.g. erosion control and soil protection through tree planting	R&D policies; institutional reform; land tenure and land reform; training; capacity building; crop insurance; financial incentives, e.g. subsidies and tax credits	Technological and financial constraints; access to new varieties; markets; <i>longer growing season in higher latitudes; revenues from 'new' products</i>
Infrastructure/ settlement (including coastal zones)	Relocation; seawalls and storm surge barriers; dune reinforcement; land acquisition and creation of marshlands/wetlands as buffer against sea level rise and flooding; protection of existing natural barriers	Standards and regulations that integrate climate change considerations into design; land-use policies; building codes; insurance	Financial and technological barriers; availability of relocation space; <i>integrated policies and management; synergies with sustainable development goals</i>
Human health	Heat-health action plans; emergency medical services; improved climate-sensitive disease surveillance and control; safe water and improved sanitation	Public health policies that recognise climate risk; strengthened health services; regional and international cooperation	Limits to human tolerance (vulnerable groups); knowledge limitations; financial capacity; <i>upgraded health services; improved quality of life</i>
Tourism	Diversification of tourism attractions and revenues; shifting ski slopes to higher altitudes and glaciers; artificial snow-making	Integrated planning (e.g. carrying capacity; linkages with other sectors); financial incentives, e.g. subsidies and tax credits	Appeal/marketing of new attractions; financial and logistical challenges; potential adverse impact on other sectors (e.g. artificial snow-making may increase energy use); <i>revenues from 'new' attractions; involvement of wider group of stakeholders</i>
Transport	Railignment/relocation; design standards and planning for roads, rail and other infrastructure to cope with warming and drainage	Integrating climate change considerations into national transport policy; investment in R&D for special situations, e.g. permafrost areas	Financial and technological barriers; availability of less vulnerable routes; <i>improved technologies and integration with key sectors (e.g. energy)</i>
Energy	Strengthening of overhead transmission and distribution infrastructure; underground cabling for utilities; energy efficiency; use of renewable sources; reduced dependence on single sources of energy	National energy policies, regulations, and fiscal and financial incentives to encourage use of alternative sources; incorporating climate change in design standards	Access to viable alternatives; financial and technological barriers; acceptance of new technologies; <i>stimulation of new technologies; use of local resources</i>

Note:

Other examples from many sectors would include early warning systems.

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- o Pricing
- o Water markets
- o Ag-urban, ag-environmental transfers
- o Rebates for water efficient technologies
- o Rebates for landscape conversion
- o Assured water supply policies
- o Regional water authorities
- o Flood control
- o Building codes: dual plumbing, pool covers
- o Landscape ordinances
- o Education

Note:

Other examples from many sectors would include early warning systems