

CLIMATE CHANGE

Fact Sheet

BACKGROUND

The overwhelming consensus from the majority of climate and atmospheric scientists worldwide indicates that the global climate is changing as a result of human activity. Using sophisticated global climate models (GCMs), scientists have estimated the potential range of long-term temperature and precipitation changes based on different scenarios of continued emissions of greenhouse gases (GHG) and climate circulation assumptions. Local universities and research centers take the results of the GCM analysis and downscale them to finer resolutions based on topography and local weather patterns. In preparing LADWP's 2010 Urban Water Management Plan, downscaled summaries of the potential change in climate from Scripps Institute of Oceanography were analyzed for the City of Los Angeles.

The estimated average climate change under two GHG emissions scenarios (current trend vs. reduced projections) are shown in Figures 1 and 2 (Figure 2 on next page). By 2040, it is expected that temperatures in the City will increase by 1.0 to 1.5 degrees Fahrenheit. By 2095, it is projected that temperatures in the City could increase by 3.5 to 6.0 degrees Fahrenheit, depending on levels of GHG mitigation. Precipitation forecasts are less predictable, with some models showing increases in annual precipitation, while others showing decreases in annual precipitation. However, the consensus by many climatologists regarding precipitation is that there will likely be more extreme flooding and droughts events.

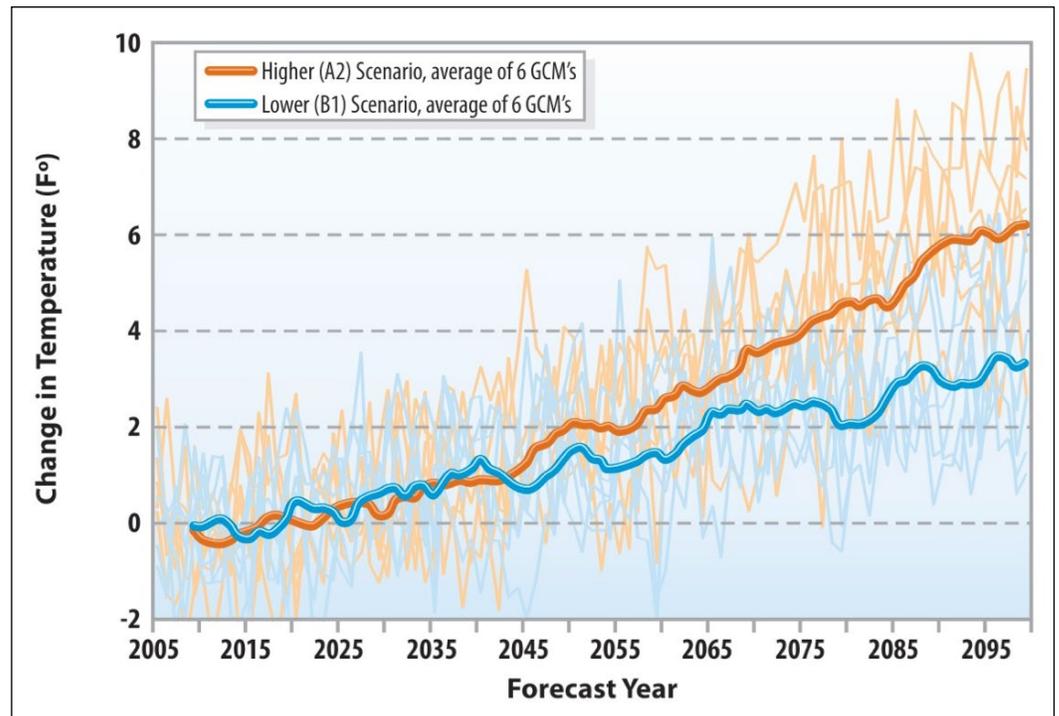


Figure 1. Expected Changes in Temperature for City of Los Angeles

CLIMATE CHANGE IMPACTS

Based on statewide and localized projections of climate change, experts predict the following impacts to occur in the absence of mitigation and adaptation:

- Greater temperatures will lead to heat island impacts and more energy needed to cool buildings and homes
- Greater water demands due to greater irrigation and cooling requirements
- Reduced snow pack in Sierra Nevada and Rocky mountains, which will result in lower amounts of imported water supply from the State Water Project, Colorado River and Owens Valley
- Increased sea levels along California's coast, causing inundation of critical facilities and homes currently close to sea level

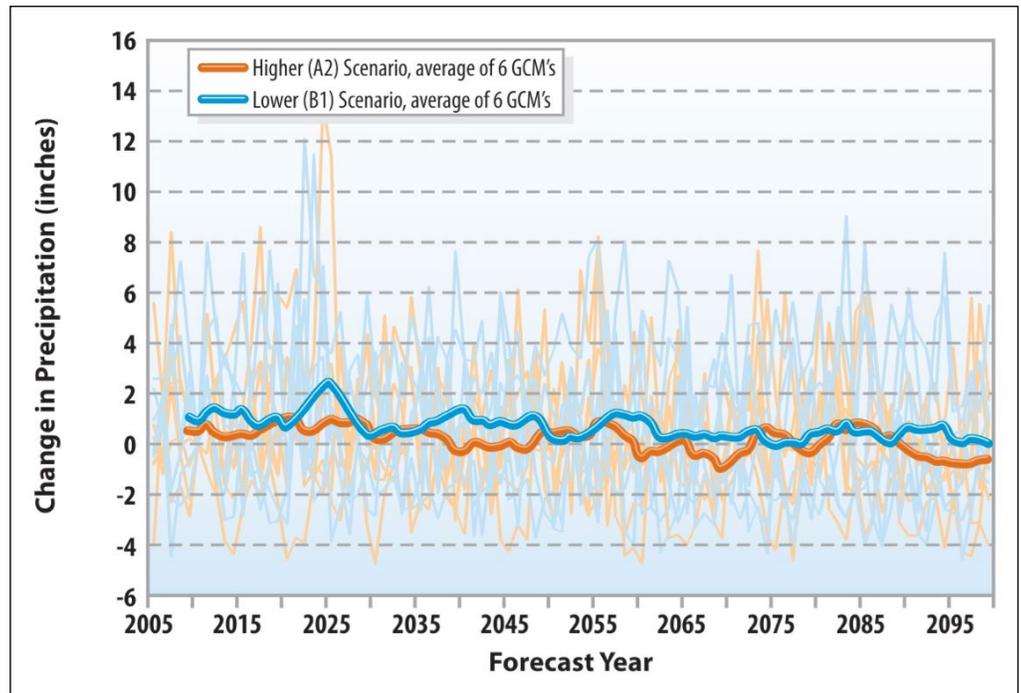


Figure 2. Expected Changes in Precipitation for City of Los Angeles

- Possible increase in localized flooding
- Stress on local ecosystems due to greater temperatures and prolonged droughts

CLIMATE CHANGE MITIGATION STRATEGIES

Mitigation strategies seek to reduce GHG emissions through three broad strategies:

- Energy efficiency measures that reduce energy consumption
- Capturing GHG emissions through absorption or sequestration so they do not enter the atmosphere
- Use of cleaner energy sources that produce no or little GHG emissions

CLIMATE CHANGE ADAPTATION STRATEGIES

Adaptation strategies are those that reduce the impact of climate change. Examples of adaptation strategies that the City is currently doing or can implement in the future include:

- Increase conservation of potable water supplies (especially outdoor water uses), which results in reduced reliance on imported water
- Increase reuse of wastewater for non-potable and indirect potable uses, which reduces the impacts of droughts caused by lower availability of imported water
- Increase capture of stormwater to take advantage of wet weather periods and extreme events
- Retrofit or move critical facilities located along the vulnerable coastal areas