Celebrating Neighbors

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Natomas Environment
By Elissa Lynn

Elissa Lynn is the Chair of the California Climate Change Technical Advisory Group and Former TV Chief Meteorologist in Sacramento. She is also a longtime Natomas resident.

The recent levee repair along Garden Highway will resume now that the WRDDA bill is signed. We will see great progress being made, because Natomas took the initiative in the past and it is paying off for our safety.

Preparing for Change

Sitting at the confluence of two major rivers and receiving rainfall only half the year, Sacramento is vulnerable to the vagaries of Mother Nature. Flooding, drought, storms, and even sea-level are all factors that play a role in our water supply and livelihoods. Climate change means greater variability in extremes, beyond those already experienced. Records show California has had a shift in timing of the valuable Sierra snowpack over the last century; it's shrunk by 10 percent and it melts weeks earlier. There has also been a trend toward greater rainfall than snow during our wet months.

Climate models project that Natomas' future will include longer dry spells, periods of heavier rain when it does storm, and reduced summer water supply.

Precipitation projections show the total amount may stay the same, but it will come in strong bursts, with potentially longer dry spells in between. These larger extremes, on both the wet and dry ends, are the result of a changing climate.

Half of California's precipitation takes place in just three months; December, January, and February. This winter was the driest on record, and the State faces a potential 4th year of drought next year (see chart for recent shortfall). As time goes on, scientists will be better able to determine the impact of climate change on drought, but if these are indications of a trend toward lower precipitation, preparing for change is already important.

The Natomas area has seen a temperature increase in the past century between 1 and 2° F. Just because it's not 110° every day all summer does not mean there is no global warming. The globe warms, and individual places can become warmer, or maybe windier; other places become wetter or drier. This is the reason behind the term 'climate change.' The Natomas area is likely to become gradually warmer in 50 years' time, to the tune of 4°F, on average. Biologists say this warming will have an impact on local plant and animal habitat, pests and wildfire risk.

The State of California has a team of experts looking at the models to determine which future scenarios are the most likely. Local communities will create appropriate adaptation plans and make their own decisions as to the best strategies for their residents. This isn't all bad news. The responses to a changing hydrology are similar to those that are good water management at all times; emergency preparedness, conservation, having a diversity of water supplies, and choosing storage options that benefit the environment as well as supply.

(right)
Climate scientist, Elissa Lynn (red hair) and the California Climate Change Technical Advisory Group

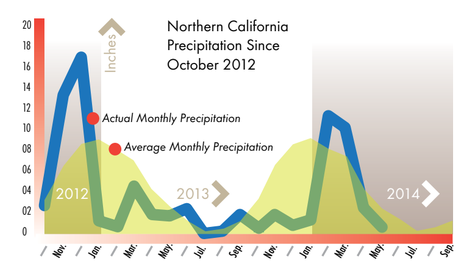
Publisher's Note:
Read Elissa Lynn's community profile on page 14 of the October 2013 issue of N magazine.

Preparation in Natomas is primarily focused on the aspect that threatens this area the most; flooding. In order to reduce flood risk, major improvements to the perimeter levees protecting Natomas began in 2007, by the Sacramento Area Flood Control Agency, using State and local funds. The remaining work to provide at least 200-year flood protection (0.5 percent chance of flooding in any year) will be done by the Corps of Engineers. (See sidebar article on levee improvements legislation).

Paul Devereaux, RD100 Director and Elissa Lynn, Chair of the California Climate Change Technical Advisory Group and N magazine contributor.

Reclamation District 1000 General Manger Paul Devereux notes, "The levee improvements recently completed and those anticipated in the near future certainly make us less susceptible to climate change; but we still need to be vigilant and ready to adapt in terms of our infrastructure, operations, and communications."

Residents in Natomas are currently required to carry flood insurance if they have a mortgage, until the levee improvements are complete and the levees certified. Even after completion, property owners in Natomas living behind levees are encouraged to continue to carry flood insurance (available at a reduced premium), given the unpredictable nature and uncertainty of future weather patterns.



(above)
Local precipitation is tallied by water year, not calendar year; Northern Sierra precipitation is shown, as it is key to Natomas' and the State's water supply. The majority of months during this time have been below average. Climate change may not be the only driver of dry conditions, but it does impact water supply. Over time, California is projected to experience longer dry periods.

The vast majority of climate scientists agree the burning of fossil fuels is causing a significant portion of the warming underway. Carbon dioxide levels are higher than any time in the last 800,000 years, at least. The climate models can't reproduce the observations without including human emissions. So, another strategy for dealing with climate change is to reduce our energy consumption. As Phil Serna, Sacramento County Supervisor, District 1 and Member, California Air Resources Board says, "Much of my time and energy serving on the California Air Resources Board has been dedicated to AB 32 implementation and promoting the efficacy of California's efforts to address climate change. Needless to say, it is a lot of responsibility."

Conservation plays a huge role here, too. Families in Natomas can do their part by calculating their carbon footprint, and reducing power use year-round and especially during peak periods this summer.

Natomas Levee Improvement Legislation

Special to N magazine By: **Congresswoman, Doris Matsui**

On June 10, President Barack Obama signed into law the Water Resources Reform and Development Act of 2013 (H.R. 3080, or WRRDA).

This law authorizes the Army Corps of Engineer's participation in the Natomas Levee Improvement Project (NLIP) and signifies a major milestone in improving Natomas' levees.

I previously introduced the Natomas Basin Flood Protection Improvements Act, which called for the NLIP to be authorized by Congress. The final version of WRRDA includes the same language as this legislation. Now, focus will shift to funding, designing and constructing the levee improvements. In March, prior to authorization, the NLIP received $1 million from the Army Corps of Engineers' to jump start engineering work.

Additionally, with the authorization achieved, the City of Sacramento will now work with the Federal Emergency Management Agency to update Natomas' flood map and lift the building moratorium. I will continue to press for robust levels of funding that will ensure the project is constructed and completed as soon as possible.

LearnMore

- Climate Change Indicators in California: oehha.ca.gov/multimedia/epic/2013EnvIndicatorReport.html
- California Climate Change Technical Advisory Group: water.ca.gov/climatechange/cctag.cfm
- California Climate Adaptation Planning Guide: resources.ca.gov/climate_adaptation/local_government/adaptation_policy_guide.html
- Energy Footprint Calculator coolcalifornia.org
- Natomas Levee Improvements safca.org
- Reclamation District 1000 rd1000.org
- National Flood Insurance floodsmart.gov