message from the
general manager

At a time when the State faces uncertain water supply conditions, renewable resource management is imperative. The Inland Empire Utilities Agency (IEUA/Agency) exemplifies the utility mission of maintaining quality resources while mutually promoting environmental awareness.

IEUA is a leading agency in southern California for water-use efficiency, renewable energy, resource management, and public awareness, while making sustainability a top priority. Transforming from solely a supplemental water provider to also providing wastewater treatment, developing renewable energy and providing compost, IEUA has expanded its reach to be a fundamental asset in environmental stewardship for the region.

The Agency continues to serve a resource leadership role and recognizes the region’s needs while also taking population growth into account. IEUA’s service area, which currently serves 875,000 people, is expected to reach 1.3 million people by 2030. As current growth trends move upward, IEUA’s Board of Directors have recognized the need to develop new local water supplies to offset the need for additional imported water, to reduce potential drought impacts and to lower its net energy use. To successfully manage the growth over time, the Agency has maintained a 66-year history of innovation and efficiency. As we work to build a sustainable future, we continue to search for and implement innovative solutions.

A key development has been the Agency’s stride toward energy optimization. Our Board of Directors remain committed to sustaining and improving our performances and services into the future. To do this, they have made the decision to invest in renewable generation to reduce greenhouse gas emissions, ensure energy cost savings and remove our facilities from the electric grid for peak power needs by 2020.

IEUA makes it a priority to lead by example and provide renewable resource initiatives that deliver cost savings and resource reliability collectively.

We look forward to the future and will continue to demonstrate fiscal responsibility while implementing a strategic resource plan to maintain a reliable water and resource supply through pioneering stewardship initiatives for the region.

P. Joseph Grindstaff
General Manager
IEUA is responsible for serving approximately 875,000 residents over 242-square miles in western San Bernardino County.

Environmental stewardship serves as a core value of the Agency. It is our goal to take the necessary steps to provide a high-quality water supply while saving energy, reducing the need for additional electricity from the grid, reducing greenhouse gas emissions, and optimizing the region’s resource supply. Essentially these initiatives are steps to lead the way in sustainable resource management and the Inland Empire Utilities Agency serves as a prime recognizable leader.
LEADER MENTOR PIONEER

Director Gene Koopman was first elected to the IEUA Board in 1998. A man of great integrity and commitment, Director Koopman was dedicated to protecting and improving the Chino Basin. As a long time dairyman, he brought a unique perspective to the water community and was well known for his pragmatic, no nonsense style. A native southern Californian, Koopman moved to Ontario in 1969 to start a dairy farm. During his time as a dairyman, he served the residents of the Agricultural Preserve in a number of roles, including an 18-year tenure on the Milk Producers Council, 10 of which were as chairman; he was a founding member of the Western States Dairy Producers Association; and, he was a nine-year Board member of the Southern California Farm Credit Alliance. In 1993, the Chino Chamber of Commerce honored Koopman as the “Outstanding Dairy Person of the Year.” IEUA was privileged to have him as a member of its Board for 18 years. Koopman served as the Board Secretary/Treasurer from 2005-2008, was the past-representative to the Metropolitan Water District of Southern California, and at the time of his passing was the Vice Chairman to the Inland Empire Regional Composting Authority and Vice Chairman of the Chino Basin Watermaster Agricultural Pool Committee.

He will be greatly missed.

In Memoriam

Gene Koopman
1942-2016

note: Current Board and Executive Team as of January 2017.

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INLAND EMPIRE UTILITIES AGENCY

2016 ANNUAL REPORT
supplemental water provider

The Agency is a member of the Metropolitan Water District of Southern California (MWD) and thus acts as a supplemental water provider. Approximately 30 percent of the water used in the region is imported from MWD through the State Water Project. Over the last several years, imported water deliveries from northern California have declined from a high of 78,872 acre-feet (AF) in 2009 to 31,722 AF in 2016. IEUA anticipates a trend of declining usage as a response to water-use efficiency measures being implemented in California. The regional water use for fiscal year 2015-2016 was 168,799 AF per year, the lowest water use for the region since 1995.

Aggressive efforts have been made to diversify and maximize local resource development and expand water-use efficiency programs. These efforts aim to prepare the service area for future dry years and increase regional resiliency in the face of climate change.

wastewater treatment

IEUA owns and operates five facilities specializing in regional wastewater and recycled water services. The Agency’s water recycling plants collectively take in approximately 50 million gallons of wastewater per day for treatment. Several treatment processes contribute to providing quality recycled water pursuant to Title 22 regulations.

Major Treatment Processes:

• Preliminary Treatment – Wastewater flows through bar screens and grit chambers, where the more dense materials such as sand, dirt, stones, and rags, etc. are removed.

• Primary Treatment – As wastewater goes through tanks that allow the particles/solids to settle, approximately 65% of the suspended solids are removed.

• Secondary Treatment – This is the biological process in which the organic solids are consumed by microorganisms. This process removes in excess of 90% of the organic material in the wastewater.

• Tertiary Treatment – Water is passed through filtration to remove suspended organic solids, bacteria and viruses.

FACT

Super Bowl Sunday is the highest flow day for IEUA’s wastewater treatment plants. The second highest flow day is Thanksgiving.
IEUA began selling recycled water in the 1970s as a low cost alternative to potable water for large irrigation customers. Since 2000, IEUA and its local water providers have invested in a program to expand delivery of high quality recycled water thus improving sustainability of the region’s water supply. To date, IEUA has more than 800 connections to the recycled water distribution system. Recognizing the critical role of recycled water in the long-term water security of Chino Basin, IEUA adopted a policy and entered into agreements with its contracting member agencies to maximize the use of recycled water.

IEUA’s response to the State’s recent drought is to accelerate development of its recycled water infrastructure so that all recycled water produced through its wastewater treatment activities can be beneficially used. As part of the recycled water expansion, IEUA has enhanced the capabilities of the Groundwater Recharge Program to help replenish the area’s underground aquifers. These recharge sites enhance the reliability of the local groundwater supply for a growing population. Located throughout IEUA’s service area are 19 recharge sites designed to capture runoff from storms, imported water from the State Water Project and high quality recycled water from IEUA’s distribution system.

For fiscal year 2015-2016, IEUA recharged 9,226 AF of stormwater/local runoff, no imported water, and 13,222 AF of recycled water.
IEUA's renewable portfolio was strategically developed by identifying how available resources, such as wastewater treatment infrastructure and available land, could be applied to incorporate environmentally friendly technologies capable of producing power at a rate comparable to grid import pricing. IEUA successfully incorporated solar, wind, fuel cell, and food waste technologies into its facilities while expending limited capital and reducing its demand on the grid.

IEUA entered into a Power Purchase Agreement (PPA) with a private company and had 3.5 megawatts (MW) of solar power installed at four of IEUA's facilities. Since installation at the end of 2008, IEUA has consumed approximately 49,800 megawatt hours (MWh) of power generated from the solar panels.

In 2010, IEUA expanded its renewable energy portfolio by securing another PPA for a 1.0 MW wind turbine at Regional Water Recycling Plant No. 4 in Rancho Cucamonga and a separate PPA for a 2.8 MW fuel cell system located at Regional Water Recycling Plant No. 1 in the city of Ontario. The wind turbine was commissioned in early 2012 and has generated approximately 1,800 MWh since startup. The fuel cell system has generated approximately 48,600 MWh since operation began in 2013.

The combined generation from these renewable installations displaced approximately 16,200 pounds of criteria pollutants and 35,000 tons of greenhouse gases that would have otherwise been emitted from southern California power plants.

Again in 2010, IEUA entered into a PPA with an environmental engineering consulting firm to develop the RP-5 Solids Handling Facility (RP-5 SHF) food waste digestion site. The facility, initially designed as a manure digestion site, has been diverting regional food waste from landfills since 2012, and generating power since 2015. The goal is to produce enough digester gas to fuel two internal combustion engines capable of generating 1.5 MW each.

IEUA partnered with an energy firm to install 3.65 MW of advanced energy storage systems at Agency facilities and pump stations. The storage systems will optimize IEUA's on-site generation including solar, wind and biogas resources. The batteries will store excess renewable energy and use stored energy to power facilities when demand on the electric grid is high. The energy storage systems will also provide an added layer of protection against outages and enhance the Agency's ability to share the benefits of renewable resources between facilities.

Energy storage is key to maximizing the value of resource investments, allowing the Agency to use resources more efficiently, reduce costs and participate in building a more resilient grid for the entire region.

### PROJECT HIGHLIGHT:
#### Landmark Energy Project
#### RP-5 Battery Storage Project

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INLAND EMPIRE UTILITIES AGENCY

water-use efficiency

IEUA has established water-use efficiency goals, and to achieve those goals, the Agency offers a suite of water-use efficiency programs that focus on enhanced efforts to improve landscape management and reduce outdoor water use. During fiscal year 2015-2016, there were approximately 65,942 water saving technologies/services implemented throughout the service area. These include:

- Rebates for Commercial and Residential Customers
- Residential Turf Removal
- Commercial, Public Sector and HOA Turf Removal
- Landscape Direct Installation and Retrofit Programs
- High Efficiency Sprinkler Nozzle Voucher Program
- Landscape Evaluations and Consultations
- Weather Based Irrigation Controller Rebates
- Soil Moisture Sensor Systems
- Residential Pressure Regulation Program
- High Efficiency Toilet Rebates
- High Efficiency Clothes Washer Rebates
- Rain Barrel Rebates

The water savings achieved through these regional demand reduction activities is estimated to be 1,858 acre-feet per year, with an average lifetime savings of 21,470 acre-feet (AF). This new water savings is in addition to IEUA’s cumulative lifetime water savings of 133,937 AF for all water conserving activities since 1992.

PROJECT HIGHLIGHT: Facility Lawn Conversion Improvement Project

LEADERSHIP STEWARDSHIP SUSTAINABILITY

To conserve water and lead by example, IEUA completed a series of lawn conversion projects that convert existing turf-dominated landscape, characterized by high water use and maintenance demand, to an attractive and native landscape. As an Agency committed to promoting sustainable landscape practices, this project sets an example for the public and promotes water-wise landscape options in lieu of turf.

The project was implemented using a Metropolitan Water District of Southern California rebate for turf removal.

FACT

Over 70% of water is used for irrigation purposes. IEUA is leading by example and converting Agency facilities with high-water-use lawns to efficient, low-water-use landscapes.

Regional Water Recycling Plant No. 5 (RP-5)

The RP-5 lawn conversion project was initiated in March 2015. The project allowed for the transformation of 5.2 acres of existing turf to asphalt, decomposed granite, gravel, and hydroseed landscape. In addition to using efficient material, approximately 245 climate appropriate trees, shrubs and succulents were planted.

Regional Water Recycling Plant No. 1 (RP-1)

The RP-1 lawn conversion project is the largest of all the facilities. Consisting of nearly six acres of turf, the landscape was replaced by mulch, decomposed granite, and decorative and utility gravel. Nearly 45 existing citrus, apple, cedar, and camphor trees were preserved and drip irrigation was used to water them. Additionally, over 400 native species of trees, shrubs, grasses, and succulents were planted.

Carbon Canyon Water Recycling Facility (CCWRF)

The CCWRF lawn conversion project consisted of an estimated 2.8 acres. The landscape was converted into seven distinctive areas of gravel, decomposed granite, shredded mulch, and boulders. Additionally, over 300 native species of perennials, shrubs, succulents and trees were planted.
IEUA invests in our future generations and provides a range of programs offered to kindergarten through 12th grade students. These programs include: Water Discovery field trips to the Chino Creek Wetlands and Educational Park*, Water is Life poster contest, Garden in Every School® program, National Theatre for Children, Solar Cup competition, and more.

**Water Discovery Field Trip:** IEUA continues to provide free educational field trips to schools at the Chino Creek Wetlands and Educational Park to promote the value of natural treatment wetlands, the creation of habitat for endangered/sensitive species and environmental stewardship. A busing mini-grant is offered to low-income elementary schools within the state of California to take part in the field trip program, partially funded by the California Department of Parks and Recreation. During fiscal year 2015-2016, approximately 3,500 Girl Scout troop members, elementary and high school students took part in the Water Discovery field trip.

**Garden in Every School® Program:** The goal of the program is to educate students and the community about water-wise usage through a garden landscape featuring low water-use plants and efficient irrigation. During fiscal year 2015-2016, IEUA awarded water-wise garden grants to four schools within the service area for the establishment of a water-wise garden: Cortez Elementary School (Chino), Eagle Canyon Elementary School (Chino Hills), Citrus Elementary School (Fontana), and Truman Middle School (Fontana). IEUA also awarded two mini-grants to schools located in Rancho Cucamonga (Golden Elementary School and Etiwanda Colony) for improvements to their present gardens.

**National Theatre for Children:** The National Theatre for Children (NTC) delivered a package of live theatre, student curriculum and teacher guides to 50 elementary schools throughout IEUA’s service area to promote the water-saving message. Over the last year, NTC conducted 100 shows reaching 26,896 students and 1,094 teachers.

* The Chino Creek Wetlands and Educational Park was partially funded by a grant from the State Water Resources Control Board.

**PROJECT HIGHLIGHT:**

IEUA co-sponsored – with partner agencies – three Solar Cup teams to compete in the Metropolitan Water District of Southern California’s Solar Cup competition: Chino High School located in the city of Chino, Chino Hills High School located in the city of Chino Hills and Kaiser High School located in the city of Fontana.

1st place rookie division – Kaiser High School Solar Cup team pictured with IEUA Board Vice President Michael Camacho (far left) and Kaiser High School advisor George Mendoza (2nd from right).

- Kaiser High School took first place overall in the rookie division at the three-day competition that takes place in May at Lake Skinner.
- Chino High School placed second overall against 38 teams throughout southern California in the veterans division.
- Chino Hills High School competed successfully in all three races and showed a tremendous team effort.

The Solar Cup competition is an eight-month program in which students throughout southern California build a solar-powered boat and participate in technical inspections, submission of technical reports and create a public service announcement focusing on water-use efficiency.
in the community

ANNUAL EARTH DAY EVENT
IEUA partnered with the city of Chino to co-host a two-day Earth Day Event on April 20 and 21, at the Chino Creek Wetlands and Educational Park. The Earth Day celebration provided Water Discovery field trips to approximately 2,000 students, parents and teachers on April 20 and hosted over 1,500 community members on April 21 during Community Day.

The event promotes environmental awareness to the community and provides ways for the community to take action and support environmental stewardship. It includes environmental exhibits, free giveaways, hands-on earth-friendly activities, environmental show performances, and much more.

No Drugs Down the Drain Campaign: Only three things go down the drain – three Ps: Pee, Poop and (toilet) Paper. Unused prescription and over-the-counter medications that are put in drains or flushed down the toilet pollute the environment, so please take as prescribed and dispose of unused portions properly. Unused medication should be taken to a drug-take-back location or put in a sturdy, securely sealed container, then in a trash can where children and animals can’t reach them. Visit www.nodrugsdownthedrain.org for more information.

Garden in Every School® Dedication at Cal Aero Preserve Academy in the city of Chino. IEUA Board President Steven J. Elie presents school administrators with a congratulations frame to recognize their hard work in developing a water-wise learning garden (water-wise garden featured on the left).

Kick the Habit: IEUA developed a drought campaign focused on kicking the water-wasting habit. The goal of the campaign is to increase awareness about the drought, communicate the message of water-use efficiency and promote long-term changes in water use habits that will help to ensure the sustainability of the region’s water supply. Look for messaging in local theaters, social media feed, publications, and email communication for tips on ways to kick the water-wasting habit.

Water Softener Removal Rebate Program: Automatic water softeners leave a salty waste that harms our recycled water efforts aimed to ensure our community has a reliable water resource for the future. IEUA offers a self-regenerating water softener rebate program. During fiscal year 2015-2016 the Agency had 62 units removed with an average of $300 per rebate. The total water savings achieved from this removal was 394,400 gallons of water per year and the total salt avoided was 28,644 pounds per year.

Check out IEUA’s social media outlets – Facebook / Twitter / YouTube - @IEUA water. Receive information on events, news, water saving tips, and programs.

Check out the Chino Creek Wetlands and Educational Park Blog where you can find Owlie’s advice column on water-use efficiency tips. Visit our website at www.ieua.org for direct links.
PROJECT HIGHLIGHT: Lower Chino Area Desalination Project

Federal Funding – IEUA received a $7.2 million grant from the Bureau of Reclamation’s WaterSMART Title XVI Water Reclamation and Reuse program, which is the U.S. Department of the Interior’s sustainable water initiative.

IEUA will use the grant to help fund the Chino Desalter Phase 3 Expansion of the Lower Chino Area Desalination Project. The project will improve the quality of the groundwater and surface water in the Chino Basin by removing salts, nitrates and other volatile organic compounds. This will significantly reduce the flow of degraded water into the Santa Ana River, thereby protecting downstream water supplies and ecosystems.

The expansion is expected to create 10,600 acre feet per year of additional drinkable water which will no longer need to be imported into the area from the State Water Project.


(The contents of this document do not necessarily reflect the views and policies of any of the above referenced agencies, nor does mention of trade names or commercial products constitute endorsement or recommendation for use. Gov. Code, § 7550, 40 CFR § 31.20)

FY - Fiscal Year
workforce

The Agency’s workforce is comprised of highly skilled, motivated, professional, and committed employees who work to ensure the Agency reaches its goals.

IEUA employees work with integrity as one team, while celebrating the region’s diversity. They continue to lead the Agency by staying on the forefront of the industry through education, innovation, efficiency, and creativity. The Agency’s workforce must be trusted and transparent while being familiar with the newest technology and the current trends. Due to this workforce characteristic, IEUA pursues public participation, which includes building collaborative relationships with elected officials, the community, industry leaders, and the engaged public. Outreach efforts are complemented with a strong legislative program that gives IEUA a voice in ensuring that future regulations and legislation create cost-effective, sustainable value.

Due to the work that is put in by IEUA employees, we are able to help the region secure a reliable water supply, promote sustainability solutions, collect and treat wastewater with recycled water as the end-product, – enhancing drought resiliency in the region – and provide education and outreach programs to the community and schools to encourage the preservation of our precious resources.

For the 17th consecutive year, the Agency was awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada (GFOA) for its Fiscal Year 2014/15 comprehensive annual financial report.

The Agency received a $7.2 million grant from the Bureau of Reclamation’s WaterSMART Title XVI Water Reclamation and Reuse program, which is the U.S. Department of the Interior’s sustainable water initiative. IEUA, in association with the Chino Basin Desalter Authority, will use the grant to help fund the Chino Desalter Phase 3 Expansion of the Lower Chino Dairy Area Desalination and Reclamation Project. The expansion is expected to create 10,600 acre feet per year of additional drinkable water, which will no longer need to be imported into the area from the State Water Project.

The Building Industry Association of Southern California, Baldy View Chapter honored IEUA with its “Good Government” award, recognizing the Agency’s efforts in drafting and adopting a new ten-year capital improvement plan to ensure western San Bernardino County continues to have a reliable water and sewer treatment system. The award showcased the Agency’s demonstration of leadership and public responsibility.

IEUA announced the launch of a landmark energy project using advanced energy storage systems to integrate solar, wind, biogas, and grid resources in order to optimize renewable generation, reduce demand on the electric grid and lower energy costs. Integrating this first-of-its-kind project will reduce the Agency’s peak demand from the grid by as much as 14% and reduce total energy costs by 5-10%.

IEUA achieved Climate Registered™ status by successfully measuring its carbon footprint according to The Climate Registry’s best-in-class program, then having it verified by a third party and reporting the data on The Registry’s website. This allows the Agency to prepare for future regulations, identify possible inefficiencies and potential for cost savings. It is a significant step towards reducing energy usage, costs and carbon emissions.