



OPERATORS: YOUR MOST CRITICAL ASSET

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Division of Compliance Assistance
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FOR INFORMATIONAL PURPOSES ONLY

- Info is general for consumption
- Please see the regulations for specifics on operator certification and the requirements for facilities.
- Check out our website for more information:
<http://dca.ky.gov/certification/Pages/default.aspx>

WATER REGULATIONS

- <http://www.lrc.state.ky.us/kar/title401.htm>
 - Chapter 5- Water Quality (KPDES)
 - Chapter 8- Public Water Supply
 - Chapter 11- Certified Operators



WHAT WE WILL COVER

- Why certified operators
- What it takes to be an operator
- Look at the national picture (water operators and other occupations)
- Kentucky specific numbers and issues
- Steps of succession planning

DIVISION OF COMPLIANCE ASSISTANCE



Simplifying Compliance

We will assist and educate regulated entities so they understand and can comply with their environmental obligations.



Living Greener, Growing Stronger

We will assist, educate and encourage Kentucky's citizens, communities and businesses so they make informed choices that value Kentucky's environment and create healthier, stronger communities.



Certifying Professionals

We will certify environmental professionals to maximize appropriate actions and effective operations at regulated locations





THINGS TO KNOW:

- Water and wastewater facilities require **certified** operators
- Depending on the type, size and capacity of your plant the operator you seek may need 1-9 years of experience
- It takes time to certify operators, even when using education substitution
- Certified operators are getting harder to find
- You need to think ahead

WHY DO WE CERTIFY OPERATORS

Certified Operators are crucial to ensure that we provide adequate and safe drinking water and that wastewater is treated properly before being released into the Commonwealth's streams and rivers.

Certification and ongoing training is necessary to stay up to date as new regulations and technologies emerge.

Training reinforces and advances an operator's technical knowledge, skills and abilities. It also expands an understanding of emerging technologies and best practices.



LEVELS OF CERTIFICATION

- Systems are classified by design capacity- Gallons Per Day
- You must have an operator that is certified for the classification of the facility
- You can run the plant with other combinations (talk more later)





WHAT DOES BEING CERTIFIED MEAN?

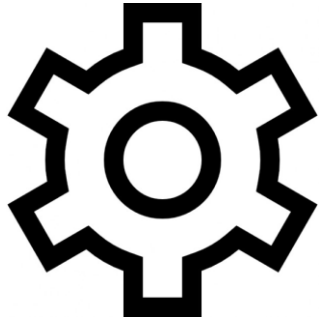
- Certification means that they have met the knowledge requirements needed to understand the basics of water or wastewater treatment.



WHAT IT DOESN'T MEAN

- That they can run a plant by themselves- depends on the system and the operator's license and skill level
- That they know how to run every kind of plant
- That they know how to run every part of a system

CERTIFICATION IN KENTUCKY



Relevant work experience



Education- substitution available



Test- 70% or above

RELEVANT WORK EXPERIENCE

- Operator experience must be relevant to the classification:
 - Type of plant
 - Can't be managerial
 - Has to be operational in nature
- Does not necessarily have to be at a facility as long as it is relevant and related
- Whatever the experience, be clear and detailed on the form. Causes delays and extra work.
 - "I run the plant" is not acceptable.
 - Describe what you actually do.
 - May have to return application.

WATER TREATMENT OPERATOR CERTIFICATION REQUIREMENTS

Certification Level	Education	Experience
Limited (only available for operators working for a school water treatment plant or for a semipublic water supply)	Minimal level of education is not required.	Minimal level of experience is not required.
Class IA-D	High school diploma or GED is required.	One (1) year of experience operating a Class IA-D or higher public water system.
Class IB-D	High school diploma or GED is required.	One (1) year of experience operating a Class IB-D or higher public water system.
Class IIA	High school diploma or GED is required.	Two (2) years of experience operating a public water treatment plant, with six (6) months of that experience in a Class IIA, IIIA or IVA treatment plant.
Class IIB-D	High school diploma or GED is required.	Two (2) years of experience operating a public water system, with (6) months of that experience in a Class IA-D, IIB-D, or higher treatment plant.
Class IIIA	High school diploma or GED is required.	Three (3) years of experience operating a public water treatment plant, with one (1) year of that experience in a Class IIA, IIIA, or IVA water treatment plant.
Class IIIB	High school diploma or GED is required.	Three (3) years of experience operating a public water treatment plant, with one (1) year of that experience in a Class IIA, IIB-D, IIIA, IIIB, IVA, or IVB water treatment plant.
Class IVA	Baccalaureate degree in engineering, science, or equivalent from an accredited college or university.	One (1) year of experience operating a Class IIIA or Class IVA water treatment plant.
Class IVB	Baccalaureate degree in engineering, science, or equivalent from an accredited college or university.	One (1) year of experience operating a Class IIIA, IIIB, IVA, or IVB water treatment plant.

WATER TREATMENT OPERATOR CERTIFICATION REQUIREMENTS

Certification Level	Education	Experience
Limited (only available for operators working for a school water treatment plant or for a semipublic water supply)	Minimal level of education is not required.	Minimal level of experience is not required.
Class IA-D	High school diploma or GED is required.	One (1) year of experience operating a Class IA-D or higher public water system.
Class IB-D	High school diploma or GED is required.	One (1) year of experience operating a Class IB-D or higher public water system.
Class IIA	High school diploma or GED is required.	Two (2) years of experience operating a public water treatment plant, with six (6) months of that experience in a Class IIA, IIIA or IVA treatment plant.
Class IIB-D	High school diploma or GED is required.	Two (2) years of experience operating a public water system, with (6) months of that experience in a Class IA-D, IIB-D, or higher treatment plant.
Class IIIA	High school diploma or GED is required.	Three (3) years of experience operating a public water treatment plant, with one (1) year of that experience in a Class IIA, IIIA, or IVA water treatment plant.
Class IIIB	High school diploma or GED is required.	Three (3) years of experience operating a public water treatment plant, with one (1) year of that experience in a Class IIA, IIB-D, IIIA, IIIB, IVA, or IVB water treatment plant.
Class IVA	Baccalaureate degree in engineering, science, or equivalent from an accredited college or university.	One (1) year of experience operating a Class IIIA or Class IVA water treatment plant.
Class IVB	Baccalaureate degree in engineering, science, or equivalent from an accredited college or university.	One (1) year of experience operating a Class IIIA, IIIB, IVA, or IVB water treatment plant.

WATER DISTRIBUTION OPERATOR CERTIFICATION REQUIREMENTS

Certification Level	Education	Experience
Class ID	High school diploma or GED is required.	One (1) year of experience operating a distribution system.
Class IID	High school diploma or GED is required.	Two (2) years of experience operating a distribution system, with six (6) months of that experience in a Class IID, IIID or IVD distribution system.
Class IIID	High school diploma or GED is required.	Three (3) years of experience operating a distribution system, with one (1) year of that experience in a Class IID, IIID or IVD distribution system.
Class IVD	Baccalaureate degree in engineering, science, or equivalent from an accredited college or university.	One (1) year of experience operating a Class IIID or IVD distribution system.

BOTTLED WATER SYSTEM OPERATOR CERTIFICATION REQUIREMENTS

BW	High school diploma or GED is required.	One (1) year of experience operating a bottled water system.
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WASTEWATER TREATMENT OPERATOR CERTIFICATION REQUIREMENTS

Certification Level	Education	Experience
Limited (only available for operators working for a school wastewater treatment plant and collection system)	Minimal level of education is not required.	Minimal level of experience is not required.
Class I-OIT	High school diploma or GED is required.	Experience is not required.
Class I	High school diploma or GED is required.	One (1) year of acceptable operation of a wastewater treatment plant shall be required.
Class II	High school diploma or GED is required.	Two (2) years of acceptable operation of a wastewater treatment plant shall be required.
Class III	High school diploma or GED is required.	Three (3) years of acceptable operation of a wastewater treatment plant with one (1) year of that experience in a wastewater treatment plant with a design capacity greater than 50,000 gallons per day shall be required.
Class IV	Baccalaureate degree in engineering, science, or equivalent is required.	At least five (5) years of acceptable operation of a wastewater treatment plant shall be required. Three (3) years of the required experience shall be in a wastewater treatment plant with a design capacity greater than two (2) million gallons per day. At least two (2) years of primary responsibility in a wastewater treatment plant with a design capacity greater than two (2) million gallons per day shall be required.

WASTEWATER COLLECTION SYSTEM OPERATOR CERTIFICATION REQUIREMENTS

Certification Level	Education	Experience
Class I-OIT	High school diploma or GED is required.	Experience is not required.
Class I	High school diploma or GED is required.	One (1) year of acceptable operation of a wastewater collection system shall be required.
Class II	High school diploma or GED is required.	Two (2) years of acceptable operation of a wastewater collection system shall be required.
Class III	High school diploma or GED is required.	Three (3) years of acceptable operation of a wastewater collection system with one (1) year of that experience in a wastewater collection system with a design capacity greater than 50,000 gallons per day shall be required.
Class IV	Baccalaureate degree in engineering, science, or equivalent is required.	At least five (5) years of acceptable operation of a wastewater collection system shall be required. Three (3) years of the required experience shall be in a wastewater collection system with a design capacity greater than two (2) million gallons per day. At least two (2) years of primary responsibility in a wastewater collection system with a design capacity greater than two (2) million gallons per day shall be required.

EDUCATIONAL SUBSTITUTION

- Education in an approved field (physical science, engineering, chemistry, etc.) will can be substituted for up to 50% of the required experience.
- An Associates Degree can substitute for 2 years of experience
- A Baccalaureate Degree can substitute up to 4 years
- If you didn't finish a degree or have a degree in a nonrelated field, submit transcripts for class by class review.
- Must have a "C" or better for the class to count.
- Education substitution can only be used once.
- [Approved degrees](#) can be found on our website.

APPROVED DEGREES

The list below contains the Baccalaureate Degrees which meets the education requirements established in 401 KAR 11:030 and 401 KAR 11:040 for the purposes of obtaining a Class IV drinking water or wastewater certification. Additional degrees may be considered on a case-by-case basis.

- Agricultural
- Applied Geography with concentration in Environmental Analysis & GIS
- Bioengineering
- Biology
- Chemistry
- Engineering
- Environmental Health
- Geology
- Geoscience
- Horticulture, Plant and Soil Sciences
- Mathematics
- Microbiology
- Natural Resources and Environmental Science
- Physics
- Public Health
- Water Resource Management

EXPERIENCE SUBSTITUTIONS

- Depends on the certification being sought
- 1 year of operational experience = 1 year of education
- Partial experience substitution for work in maintenance, lab analysis or other work related to the collection, treatment or distribution of drinking water or wastewater.

CERTIFICATION CLASSES

- Offered through our division
- Not required to attend in order to get a license
- Does help increase the chances of passing
- Materials are available online
- Trainers hold study sessions each evening- math assistance
- Testing is scheduled after three days of classroom work
- Class and exam fee- \$190.00
- Try to get application and fee in 30 days prior to class

RENEWAL

- Operators renew licenses every 2 years:
 - Drinking Water- even numbered years
 - Wasterwater- odd numbered years
 - Deadline is **ALWAYS** June 30
 - Date is on operator's wallet card
 - \$50 online renewal fee; \$100 hard-copy renewal
 - License will expire after June 30 and will fully terminate after Dec. 31
 - Late renewal between June 30 and Dec 31 has \$250 fee plus renewal application fee of \$50/\$100.
 - Operators with expired licenses can't be in responsible charge of a plant

DEP-REN Revised 8-2009
For Official Use Only
Do not write in this space.

Mail to: Division of Compliance Assistance Certification and Licensing Branch Operator Certification Program 300 Fair Oaks Lane Frankfort, KY 40601	Commonwealth of Kentucky Department for Environmental Protection Application for Certification Renewal <i>Drinking Water Treatment, Drinking Water Distribution, Bottled Water, Wastewater Treatment and Collection System</i> Telephone: 800-926-8111 www.dca.ky.gov/certification	
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If you currently hold an Operator-In-Training certificate, you must provide a new Education and Experience Documentation Form (EED) verifying your one year of experience. The EED Form must be attached to this Application for Certification Renewal.

APPLICANT INFORMATION				
Name (First)	(Middle Initial)	(Last)	Agency Interest Number (As shown on wallet card)	
Certification Type (As shown on wallet card)			Certification Number (As shown on wallet card)	
Address (Number and Street)		City	State	Zip Code
E-Mail Address	Home Phone Number ()	Business Phone Number ()		

FACILITY INFORMATION					
List all facilities where you currently work as an operator. Attach additional sheets as necessary.					
Facility Name	County	KPDES, PWSID or Agency Interest Number	Start Date	Design Capacity, Daily Flow of Facility or Population Served	Phone Number

CONTINUING EDUCATION					
List all "Board Approved" training hours that are being used for this renewal. All hours must be earned prior to applying for certification renewal. If more space is needed, attach additional sheets to this form.					
Course Code (Available from DCA or the training vendor)	Training Course Title	Sponsor or Presenter	Date	Hours Earned	
				Drinking Water	Wastewater

RENEWAL REQUIREMENTS

- Must seek Continuing Education Requirements
 - reinforces and advances an operator's technical knowledge, skills, and abilities
 - expands an understanding of emerging technologies and best practices
 - Generally 12 hrs. of CE for Class I & II and 24 hrs. for class III&IV
 - Hours can be through our classes or through classes from outside providers that have sought board approval
 - E-search can be used to check how many CE hours an operator has

WHAT IS EXPECTED OF AN OPERATOR?





RESPONSIBILITIES

To safeguard the life, health and welfare of the public and the environment and to establish and maintain a high standard of integrity in the certified operator profession

401 KAR 11:020

SKILLS AND DUTIES

- Strong mathematical, mechanical and science skills
- Engage in logical processes for trouble-shooting
- Maintain treatment systems (piping, pumps, valves and tanks)
- Prepare chemical treatments for plant and effluent systems
- Operate instrumentation for treatment systems and meters
- Calibrate, repair, and troubleshoot treatment systems and meters
- Collect field and facility samples
- Provide state and federally mandates reports- MORs, DMRs, etc.
- Create records and observations; engage in reporting of issues and lapse of best practices
- Communicate issues, problems and processes clearly
- Demonstrate a strong commitment to plant safety activities, practices and standards

OTHER REQUIREMENTS

- While on duty, a certified operator shall carry the cabinet-issued wallet card showing the operator's current certification status.
- If information related to the operator's employment or mailing address changes from that provided in the application for certification, the certified operator shall provide written notification to the cabinet within thirty (30) days.
 - Used for reminders to renew!!!
 - We do try to call when we receive post cards that were undeliverable

RESPONSIBLE CHARGE- PUBLIC WATER SYSTEMS

- Responsible charge means: personal, first-hand responsibility to conduct or actively oversee and direct procedures and practices necessary to ensure that a facility is operated in accordance with accepted practices.
- Systems are operated by or are under direct supervision of a certified operator, other than and Operator In Training (OIT), holding certification class **equal or higher** to that required by the system.
- Generally, a system can employ an operator at one level lower on one shift per day (other than the shift worked by the operator in responsible charge) if the operator in responsible charge is able to respond within 30 minutes (water) or 2 hours (wastewater) should he/she be called to the system.

Operator Ethics

DEP has been placing a stronger emphasis on certified operator performance and ethics.

Certified operators are being held more accountable for their actions at their facilities.

- Notice of Violations (NOVs)
- Operator Disciplinary Actions

Operator Ethics

Code of Conduct

- Ethical codes vary from profession to profession but the rules are almost ALWAYS the same
- Establishing and maintaining our professionalism develops integrity with our stakeholders
- Unethical behavior erodes the public's trust and confidence in how or if we can do our jobs

OPERATOR ETHICS

401 KAR Chapter 11

An certified operator shall:

- During the performance of operational duties protect the health, welfare and safety of the public and the environment
- Use reasonable care and judgment in performance of duties
- If an operator's judgment is overruled by an employer under circumstances in which the safety, health and welfare of the public or environment are endangered, the operator shall inform the employer of potential consequences
- Be objective, truthful and complete in applications, reports, statements and testimony provided by the cabinet
- Ensure the integrity of the samples that the operator collects, prepares or analyzes so that the results shall be a true representation of water quality.



DISCIPLINARY ACTION

Reasons For Taking Action:

- Willfully or negligently caused or violated requirements of KRS Chapters 223 or 224
- Willfully or negligently falsified, failed to maintain, or submit records required by Chapter 5 or 8

CONSEQUENCES

Disciplinary actions may include, but are not limited to:

- Probation not to exceed 1 year
- Suspension of license not to exceed 4 years (during which the operator can't be in responsible charge and experience gained during suspension shall not be included toward meeting the requirements of 401 KAR 11:030 or 11:040)
- Revocation of license
- Civil or criminal penalties
- A combination of the action above

Operator Disciplinary Action

Review Procedure:

- Complaint/referral is received by the certification program (from inspectors, public, other operators, etc.)
- Department staff may issue NOV
- Generally, the next step is to send the referral/or complaint along with any supporting documentation to the appropriate certification board for review. If charges are considered a “criminal” case, it is referred to Office of Inspector General.

Operator Disciplinary Action

Review Procedure:

- The certification board will request to have the certified operator to appear before board to discuss the actions that resulted in the referral
- When the review is complete, the agency reviews evidence presented and the board's recommendation
- Cabinet initiates the action recommended by the board or notifies the board why an alternative action was taken

Operator Disciplinary Action

Review Procedure:

- If action is taken, the certified operator and their employer(s) are notified of the action, reasons for action and length of action.
- A certified operator who has a license suspended or revoked cannot serve in direct responsible charge as long as action is in place. If license is revoked, the operator is ineligible for future certification in same discipline (water or wastewater)
- Experience gained during suspension cannot be counted toward any future certification.

Operator Disciplinary Action

Review Procedure:

- During probation or suspension the board and/or cabinet will monitor your performance and work activities.
- At the end of action, the agency will determine if all remedial measures were met and may confer with the board to determine whether the action should be lifted or whether additional action is required.
- An operator who considers him/herself aggrieved by a disciplinary action may file a petition for hearing with the Cabinet pursuant to KRS 224.10-420(2).

Operator Disciplinary Action

Scenario 1:

Failure to use reasonable care and judgment in the course of employment as a certified operator, failure to apply ability in the performance of duties, and willfully violated the requirements of **KRS Chapter 223 and 224 and 401 KAR Chapter 8**. Operator failed to submit MORs over an extended period of time and to maintain any other documentation related to chlorine residuals.

Recommended Action – revocation of operator's Class IBD Drinking Water license.

Final Action – license terminated. Operator not eligible for certification for a period of 5 years and at that point would be required to meet with the certification board to demonstrate an understanding of his responsibilities as an operator and exhibits a willingness to perform those duties before being approved to take the examination.

Operator Disciplinary Action

Scenario 2:

Failure to perform duties, protect the safety, health and welfare of the public and the environment; failure to use reasonable care and judgment in the performance of operational duties. During inspections continued O & M non-compliance including substandard plant operation and poor facility maintenance were noted. The plant was septic and appurtances were down and had not been repaired. Lagoons were not being maintained, solids and paper from bypasses and overflows were not being cleaned up, the plant was in significant non-compliance with permit parameters, DMRs, etc. Sampling procedures were not being monitored.

Operator Disciplinary Action

Scenario 2:

Action – Downgrade operator' s Class II Wastewater Treatment license to a Class I Wastewater Treatment license. At that point, the Class I Wastewater Treatment license will then be placed on probation for a period of one (1) year. During that year, operator cannot be in primary responsible charge of any wastewater treatment facility. Operator must work for at least 6 months under the supervision of a mentor during the probation period. The mentor must be certified at a level equal to or greater than the level required for the size of the system where the mentor is an operator. The mentor must be at the same facility as the operator. The operator must submit a letter from the mentor acknowledging the agreement of mentorship. Operator will be required to appear before the board at the end of the probation period to discuss his progress.

Operator Disciplinary Action

Scenario 3:

Failure to use reasonable care and judgment in the performance of operational duties. Operator was responsible for multiple wastewater treatment plants. Multiple NOVs were issued for improper O & M. The plants were continuing to discharge unacceptable effluent. Several instances of plant upsets, line breaks, bypasses, etc. were not reported as required. Lagoons were not being properly maintained.

Action – Suspend operator's Class III Wastewater Treatment certification for 2 years; operator shall attend 24 hours of board-approved training on activated sludge and regulatory & permit requirements in which at least half of the 24 hours of training must be on activated sludge; the required 24 hours of supplemental training shall not be applied toward certification renewal; and at the end of the suspension period, the operator shall appear before the Kentucky board of Certification of Wastewater System Operators to demonstrate his competency as a certified operator.

Operator Disciplinary Action

Scenario 4:

Failure to use reasonable care and judgment in the performance of operational duties. At the time of inspection, solids accumulation was observed in the effluent cascading ladder, the UV chamber and the clarifier. The RAS pump had quit and the operator shut the sweepers off in the clarifier which caused the accumulation. The rotor motor had been out for some time as well. The operator failed to contact DOW of the process failures. The operator was not available for the lab to pick up samples and would leave the fence unlocked thus compromising the chain of custodies. Poor O & M and quality assurance was repeatedly observed. Poor recordkeeping. Improper sludge wasting.

Action – revocation of operator's Class II Wastewater Treatment license. In addition to the revocation, the board also recommended a civil penalty of \$2,000.00 which may have been mitigated if the operator issued a public acknowledgement or public apology in the largest newspaper publication in Green County. The operator did issue the public apology.

Operator Disciplinary Action

Scenario 5: Local Water Department Superintendent Sentenced for Falsifying Reports at Water Treatment Facilities

October 4, 2012

Boston - The former Superintendent of the Avon Water Department was sentenced to one year probation on charges that he made false representations in federally-required reports, regarding the disinfectant levels in the water at two water treatment facilities.

In addition to the probation sentence, U.S. District Court Judge Douglas P. Woodlock ordered John Tetreault, 55, to pay a \$15,000 fine. Tetreault must also issue letters of apology to the Town of Avon and pay to publish it in the Boston Globe, as well as in publications of the Massachusetts Waterworks Association and New England Waterworks Association. On July 10, 2012, Tetreault agreed to plead guilty to two counts of knowingly and willfully submitting to the Massachusetts Department of Environmental Protection federally-required reports that included materially false representations. On four different dates in 2010, Tetreault reported that residual disinfectant levels at two water treatment facilities in Avon, met or exceeded minimum required disinfectant levels, when, in fact, the residual disinfectant levels for each of the dates was below the required level for more than four hours at each of the facilities.

Operator Disciplinary Action

Scenario 5: Local Water Department Superintendent Sentenced for Falsifying Reports at Water Treatment Facilities Cont.

On Oct. 10, 11, and 12, 2010, at the Memorial water treatment facility, and on May 27, 2010, at the Porter water treatment facility, residual chlorine levels at the facilities fell below the minimum required level of .75 mg/L , for more than four hours. In fact, the residual chlorine level for those days was below that level for more than four hours. In the required monthly reports, Tetreault reported that residual chlorine levels at the facilities met or exceeded the minimum levels.

Under the federal Safe Drinking Water Act, the U.S. Environmental Protection Agency has established, through federal regulations, the drinking water standards, reporting requirements, record keeping requirements and enforcement provisions for states and municipalities for different types of drinking water sources and drinking water treatment facilities. In 2010, the type of treatment facilities and systems maintained by the Town of Avon (groundwater) required the facilities to maintain the state-determined residual disinfectant concentration (chlorine) every day that groundwater was served to the public. If a treatment system, such as Avon's, failed to maintain the requisite chlorine treatment level, it would be in violation of the treatment technique requirement if the failure was not corrected within four hours.

Operator Disciplinary Action

Scenario 5: Local Water Department Superintendent Sentenced for Falsifying Reports at Water Treatment Facilities Cont.

Under the federal regulations the Avon Water Department was also required to file routine monthly reports with the Massachusetts DEP that tracked daily residual disinfectant concentrations and that reported any incidents when the concentrations fell below the state-determined level of .75 mg/L of chlorine. In addition to filing routine monthly reports with the DEP, a system such as Avon's must also promptly notify the state any time the system fails to meet the minimum residual disinfectant concentration and that concentration.

United States Attorney Carmen M. Ortiz and Michael Hubbard, Special Agent in Charge of the U.S. Environmental Protection Agency Region I's Criminal Investigation Division, made the announcement today. The case is being prosecuted by Assistant U.S. Attorney Anton P. Giedt of Ortiz's Civil Division.

FLINT, MICHIGAN

Michigan health director Nick Lyon, 4 others face involuntary manslaughter charge over Flint water

Paul Egan, Elisha Anderson and John Wisely, Detroit Free Press Published 8:48 a.m. ET June 14, 2017 | Updated 4:41 p.m. ET June 14, 2017



THE ROLE OF PUBLIC OFFICIALS

- Get to know your systems
- What's in your permit
- Get to know your operators- encourage communications
- Get to know state regulators and field office staff
- Will you need to replace infrastructure
- What are the financial needs of the system in the future
- What are the employments needs at the plant- operations and management



JOB PROGRESSION

- Many plant manager position descriptions require that the applicants either hold or obtain after hire, a certification
- May want to reconsider what the positions do and what you want



QUESTIONS ABOUT
CERTIFICATION?

OPERATOR RECRUITMENT AND SUCCESSION PLANNING



AS OF JANUARY 2016

- 52k drinking water and 16k wastewater facilities in the US
- A majority served fewer than 10k people
- 478,700 people employed by utilities (operators, administration, customer service, electricians, etc.)
- No matter what the size the facility, location or occupation held, we all have one problem.....

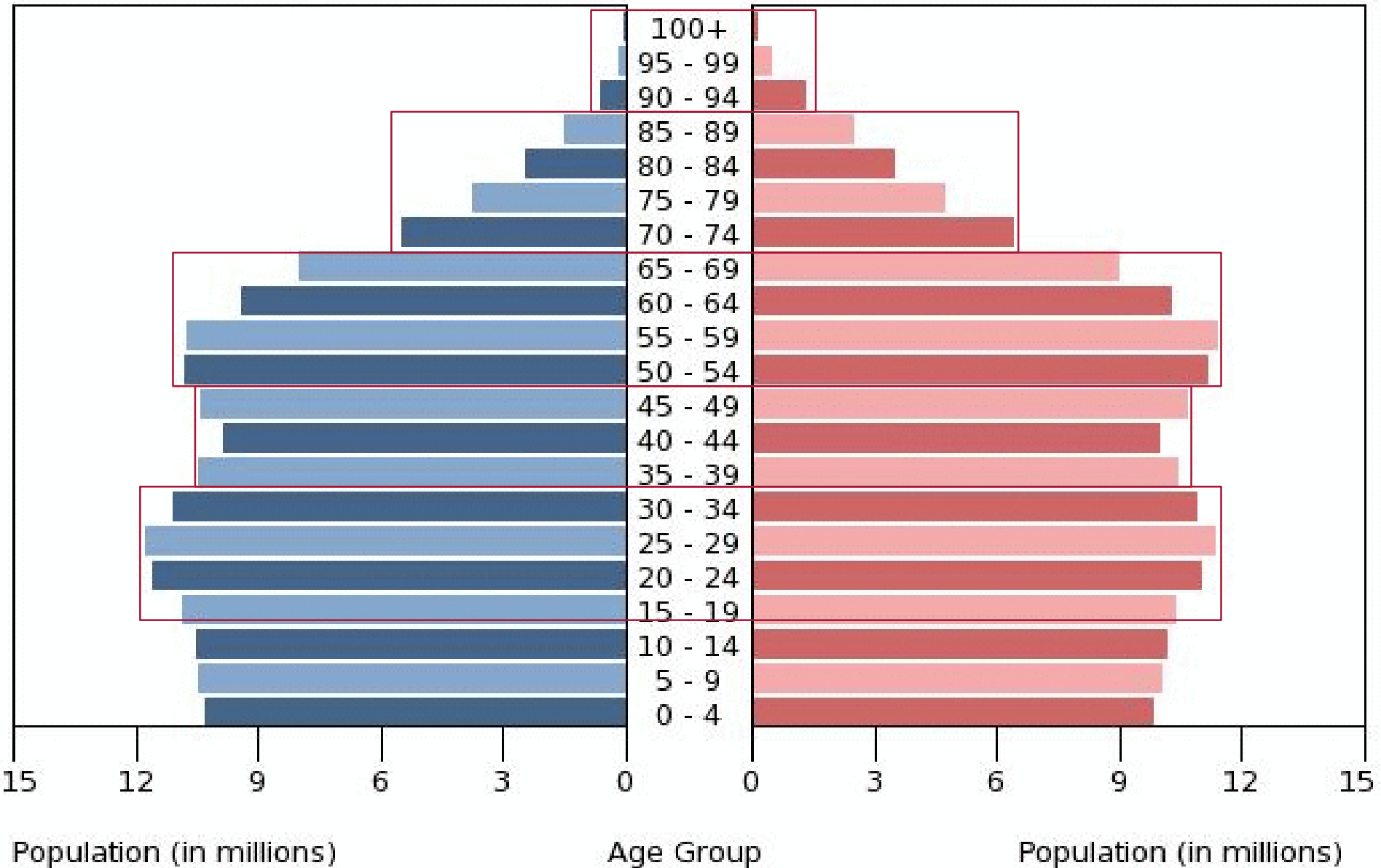
BLS data



Male

United States - 2016

Female





Although we have no control over the aging population, we do have control over recruit-

A Regulator's Perspective on Workforce Issues: Water and Wastewater Operators

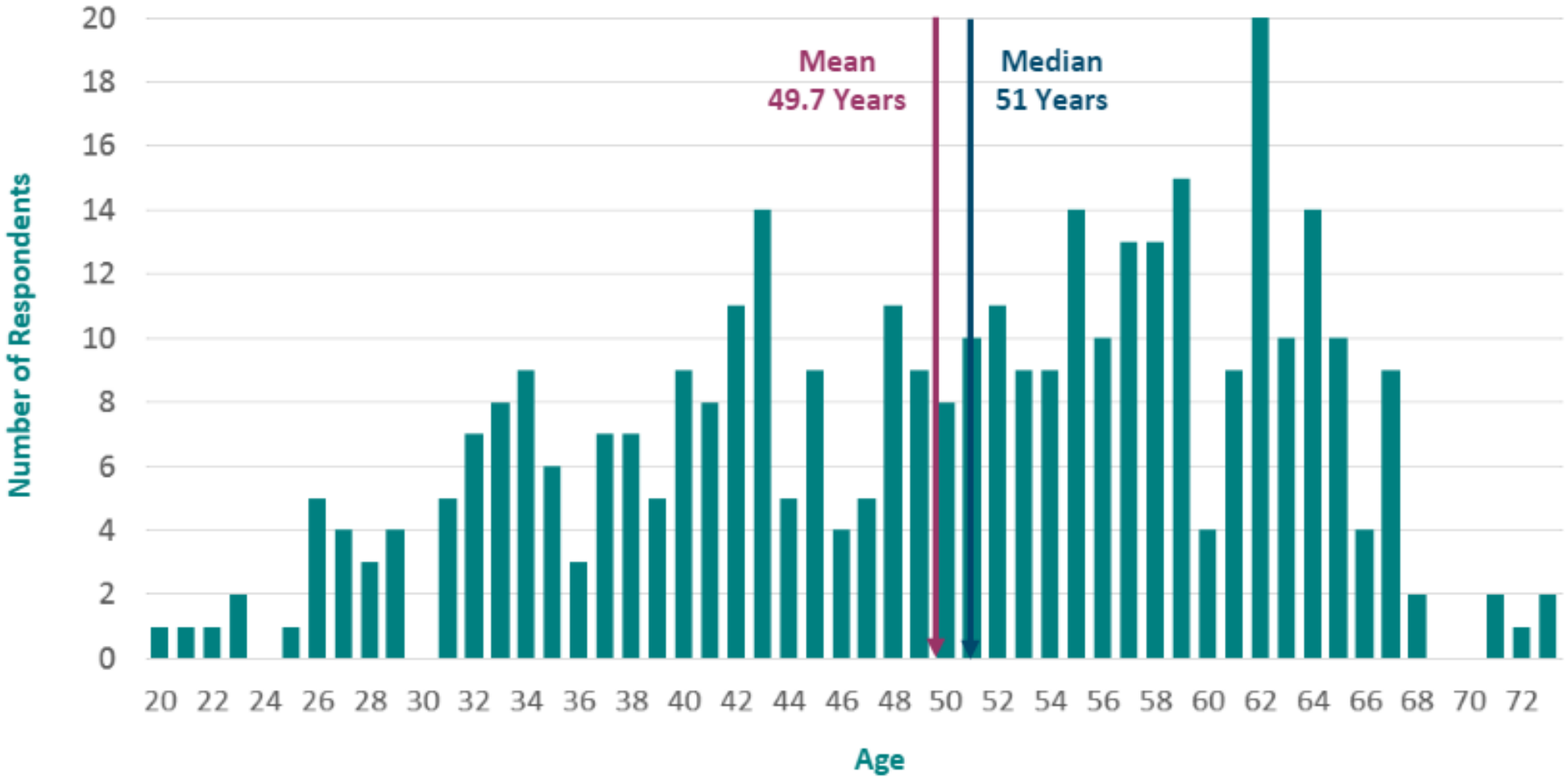
AS LARGE NUMBERS OF WATER AND WASTEWATER UTILITY EMPLOYEES RETIRE OR LEAVE TO SEEK OPPORTUNITIES ELSEWHERE, UTILITIES ARE LEFT TO FILL THESE POSITIONS AND ENSURE THAT THE EMPLOYEES' KNOWLEDGE IS NOT LOST FOREVER. JOURNAL AWWA EDITOR MARCIA LACEY CONDUCTED AN E-MAIL INTERVIEW WITH TERESA M. BOEPPLE-SWIDER, PROFESSIONAL CERTIFICATION SECTION CHIEF FOR THE NEW YORK STATE DEPARTMENT OF HEALTH, TO GAIN PERSPECTIVE ON HOW TODAY'S WORKFORCE ISSUES AFFECT PLANT OPERATORS.

- In 2007, the New York State Department of Health's Bureau of Water Supply Protection conducted an unofficial survey of New York's small water system operators (those serving a population of 3,300 or fewer) which focused on operator demographics. The results showed that the average age of these operators was 50.9 years and that 43% of the respondents expected to retire in fewer than 10 years.

OPERATORS

- “In Florida, the average age of wastewater treatment plant operators is 52 years old.” - Treatment Plant Operator Magazine 2010
- “We’re running out of time in the state of South Carolina,” he said. “The average age of our operators is 55.” – Municipal Association of South Carolina 2014

Figure 3. Age of Respondents





JAN 2018- BUREAU OF LABOR STATISTICS REPORT

- Study looked at 11 (6 large and 5 small) water facilities
- Small utilities served 30,000 or less (NRWA helped identify)
- Looked at workforce needs in water/wastewater vs overall workforce across occupations

OPERATORS VS. OTHER OCCUPATIONS

- In 2016 Current Population Survey (BLS):
 - 24.7% of water operators were 55 and over
 - 22.7% of the total US work population was 55 and over
- In 2016 median age in water occupations was 46.4
- Median age in all other occupations was 42.2

RECESSION THEN AND NOW

- Some stayed longer to make up for lost wages or for more certain times
- Some stayed beyond their earliest date to retire
- As economy expands more workers will retire
- There will also be increased competition for young talent in trade
- Water industry must become competitive vs constructions and other trades

OUTLOOK FOR INDUSTRY JOBS

- BLS projects- annual average of 9,200 job openings nationwide for water operators from 2016 to 2026
- Annual replacement need of 8.2% vs 10.9% for other occupations
- It does predict an overall decline in employment in the industry- automation
- This decline likely in larger systems, not small, rural systems

LARGE FACILITIES

- With one exception, they described hiring water operators over the past five years as “somewhat difficult”
 - Lack of candidates with a STEM background
 - Distaste for shift work among young workers
 - Lack of local candidates
 - Low pay
- Those that experienced the least difficulty had:
 - Increased geographic search area
 - Improving internal training
- Additional future challenges for large facilities:
 - May actually decrease in overall staffing- automation
 - Attracting technically qualified employees because of automated process



WHAT WORKS FOR LARGER SYSTEMS

- Advertising-multiple venues
- Word of mouth
- Industry websites
- Some apprenticeship programs



SMALL FACILITIES

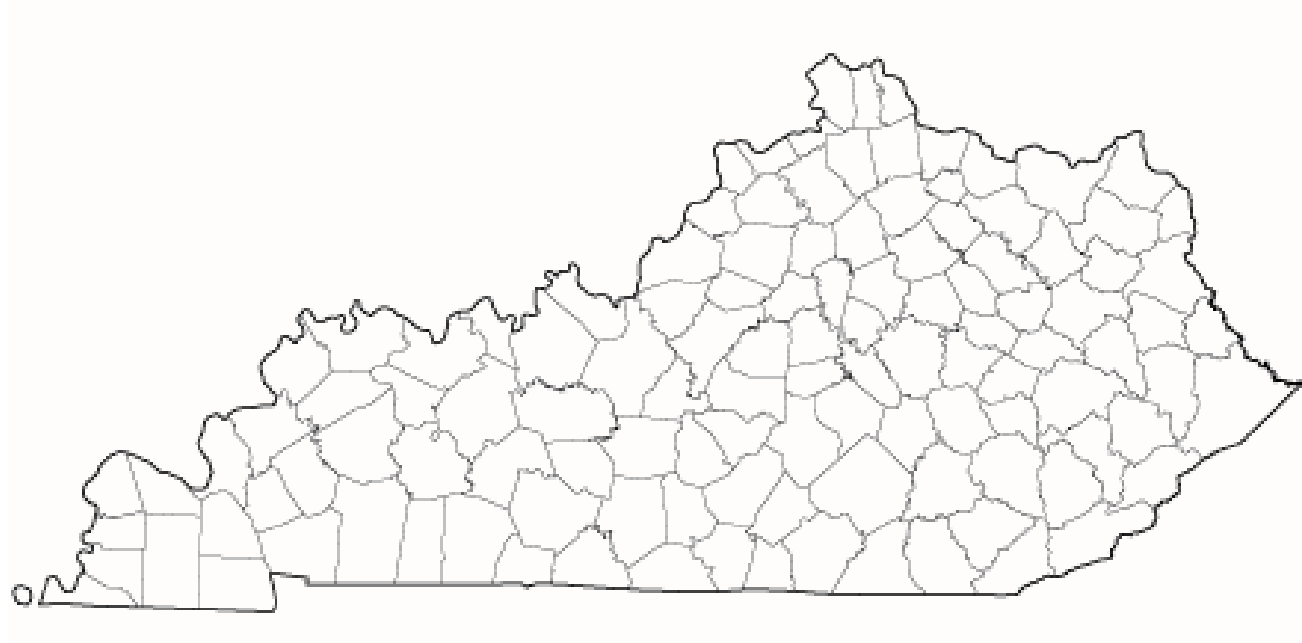
- Generally reported challenges in recruitment
- 4 of the 5 in the survey noted that replacing retiring workers could become a problem over the next 5 years
 - Unable to compete with wage rates at larger utilities
 - Unable to hire certified operators



WHAT WORKS FOR SMALL SYSTEMS

- Look for people other than certified operators and train

KENTUCKY STATISTICS

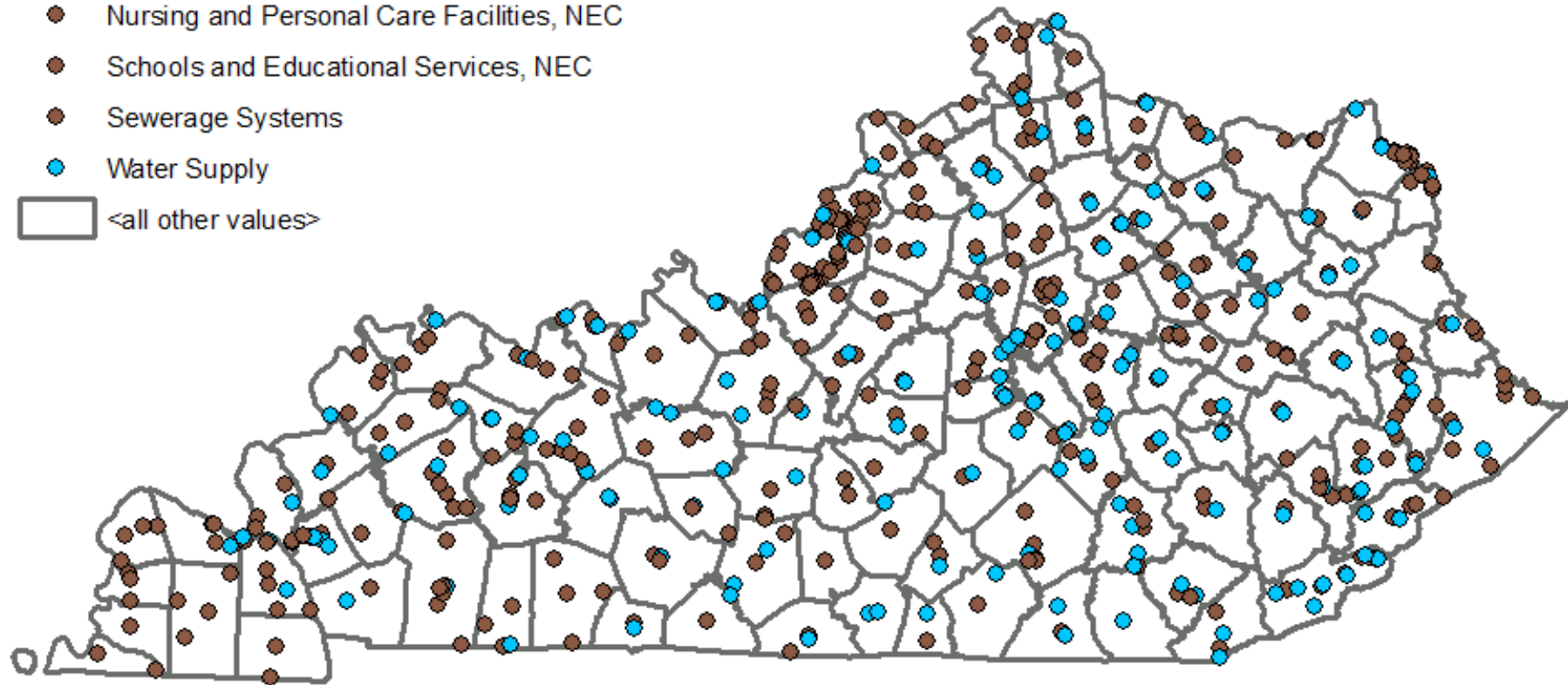


FACILITIES

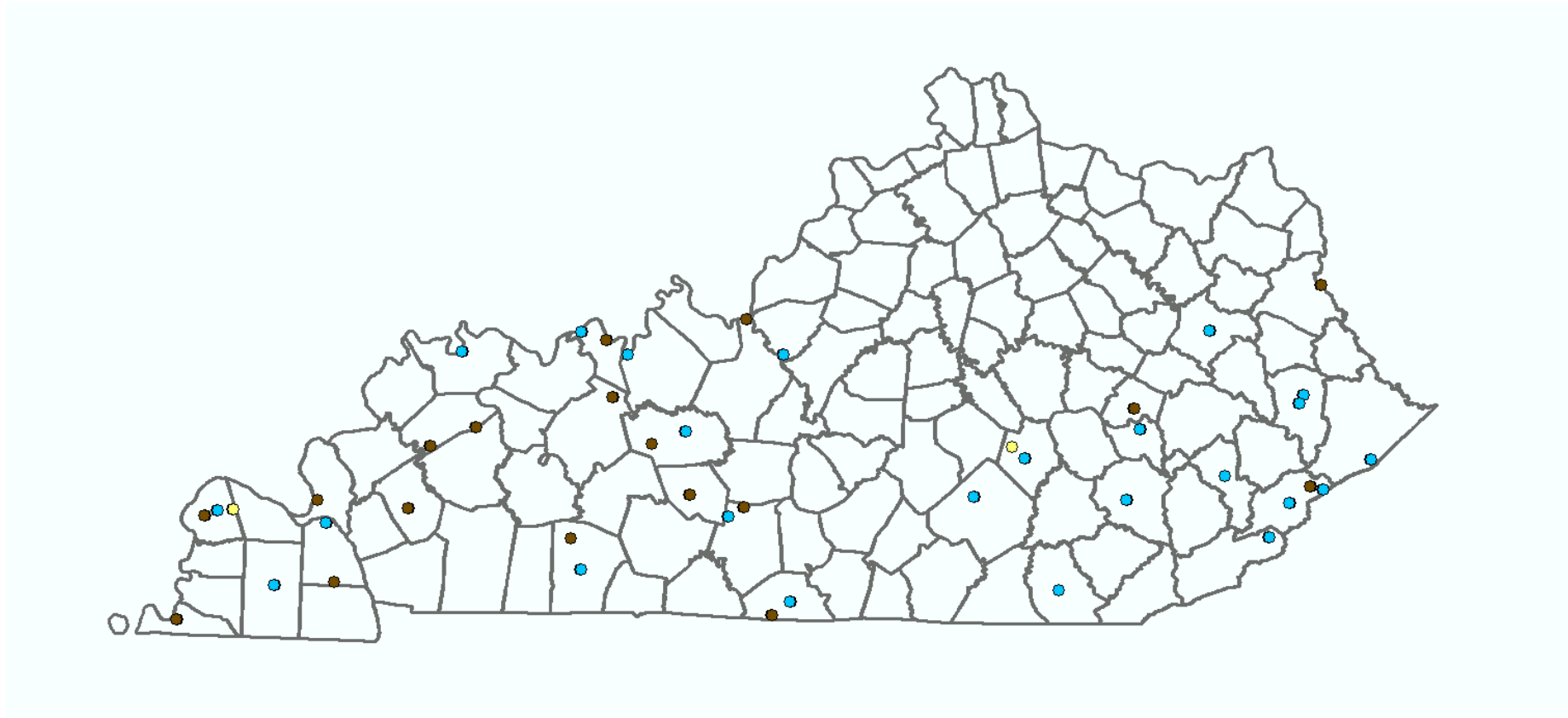
DOW KPDES Permitted Facilities

SIC_Desc

- Correctional Institutions
- Mobile Homes
- Nursing and Personal Care Facilities, NEC
- Schools and Educational Services, NEC
- Sewerage Systems
- Water Supply
- <all other values>



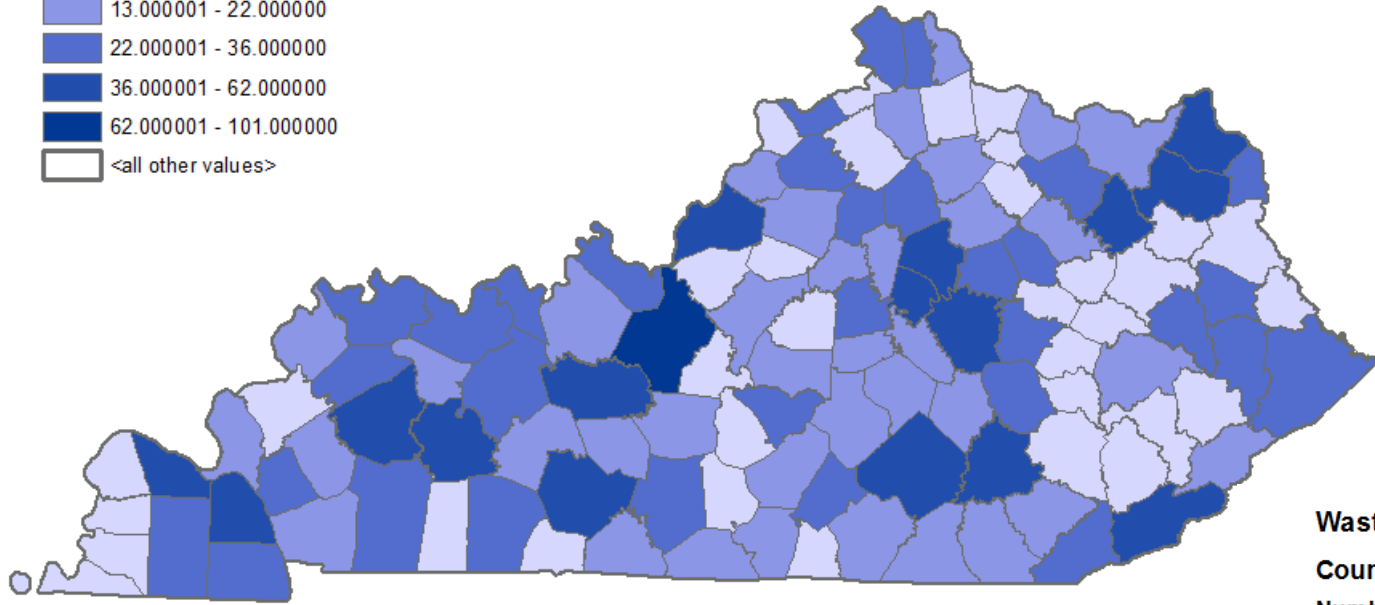
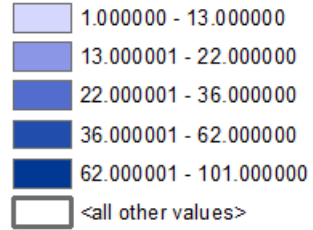
FACILITIES WITHOUT ENOUGH OPERATORS



Drinking Water Operators

County Boundary Polygons

Number

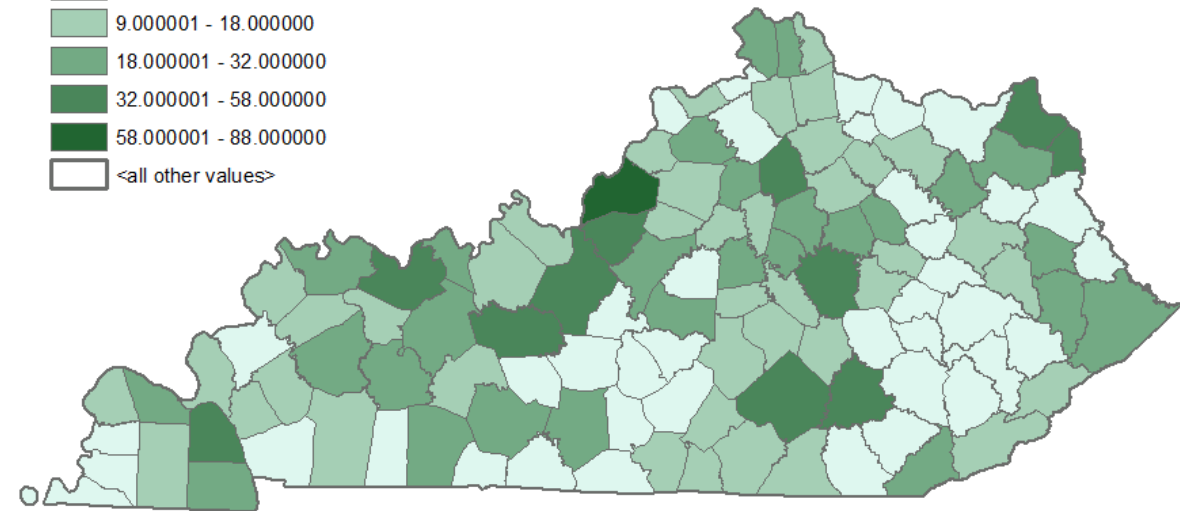
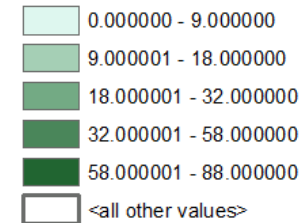


OPERATOR AVAILABILITY

Wastewater Operators

County Boundary Polygons

Number



SUCCESSION PLANNING



1. IDENTIFY REQUIREMENTS

- Read your permit and know the regulations and time frames.
- All certified operators must have a high school diploma or GED and pass the Kentucky certification exam.
- Water operator certification – must have 1-5 years of experience depending on class of facility
- Wastewater operator certification – must have 1-9 years of experience depending on the class of facility
- Education substitutions based on science degrees or coursework

2. TRACK RELEVANT TALENT POOLS



THINK LIKE A MARKETER

- Based on your requirements, who will fit the bill?
- Where do they get their information? How can you reach them?
- Don't forget some target populations.



People leaving the military have a host of skills including some people with water treatment experience.



Do you have a prison facility nearby that has onsite water treatment? People in the prison population are often tasked with this job and seek certification while incarcerated. They leave with a valuable skill set and it offers them a second chance.

2. TRACK RELEVANT TALENT POOLS

- Where could you find interested candidates?



facebook



MY NEXT MOVE

LinkedIn

CAREERBUILDER



KWQA
KENTUCKY WATER & WASTEWATER OPERATORS ASSOCIATION



KMUA
KENTUCKY MUNICIPAL UTILITIES ASSOCIATION

American Water Works Association
Kentucky/Tennessee Section

MONSTER

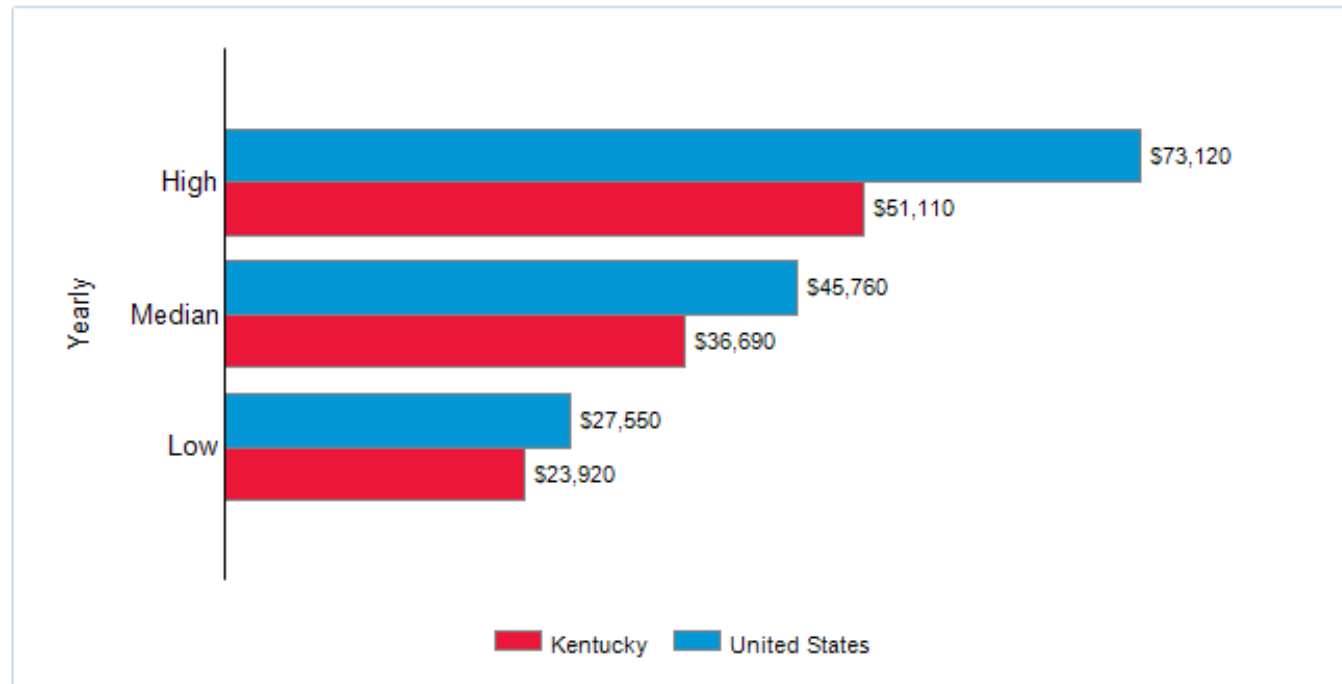
3. DEVELOP AND RETAIN TALENT

- Set salaries to keep top talent.
- Make a plan for their career path.

Wages for **Water and Wastewater Treatment Plant and System Operators** in **KENTUCKY**

[View Hourly Wages](#)

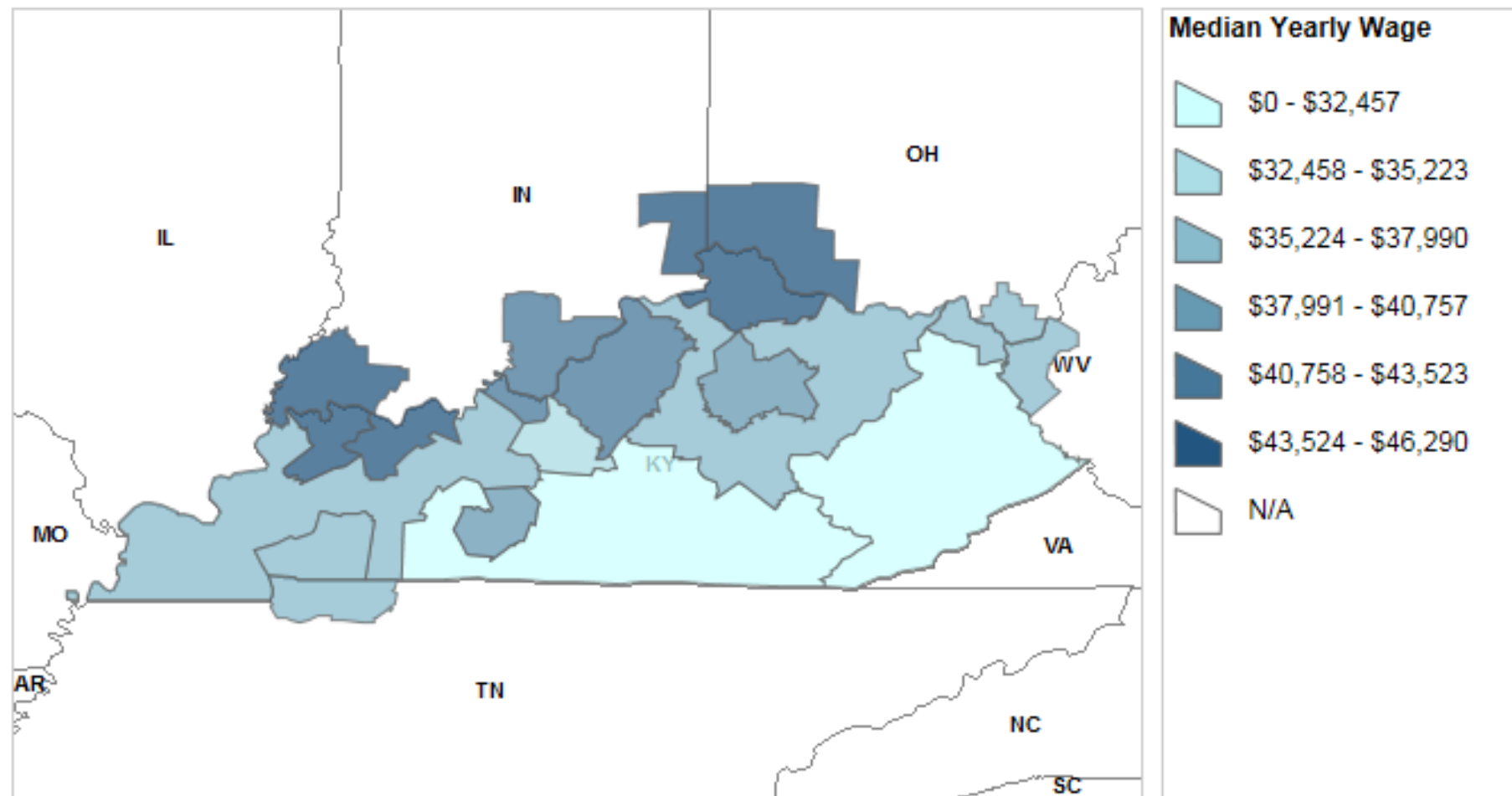
[View Table](#) : [View Chart](#) : [View Map](#)



Median Yearly Wages for **Water and Wastewater Treatment Plant and System Operators** in **KENTUCKY**

[View National Data](#) [View Hourly Wages](#)

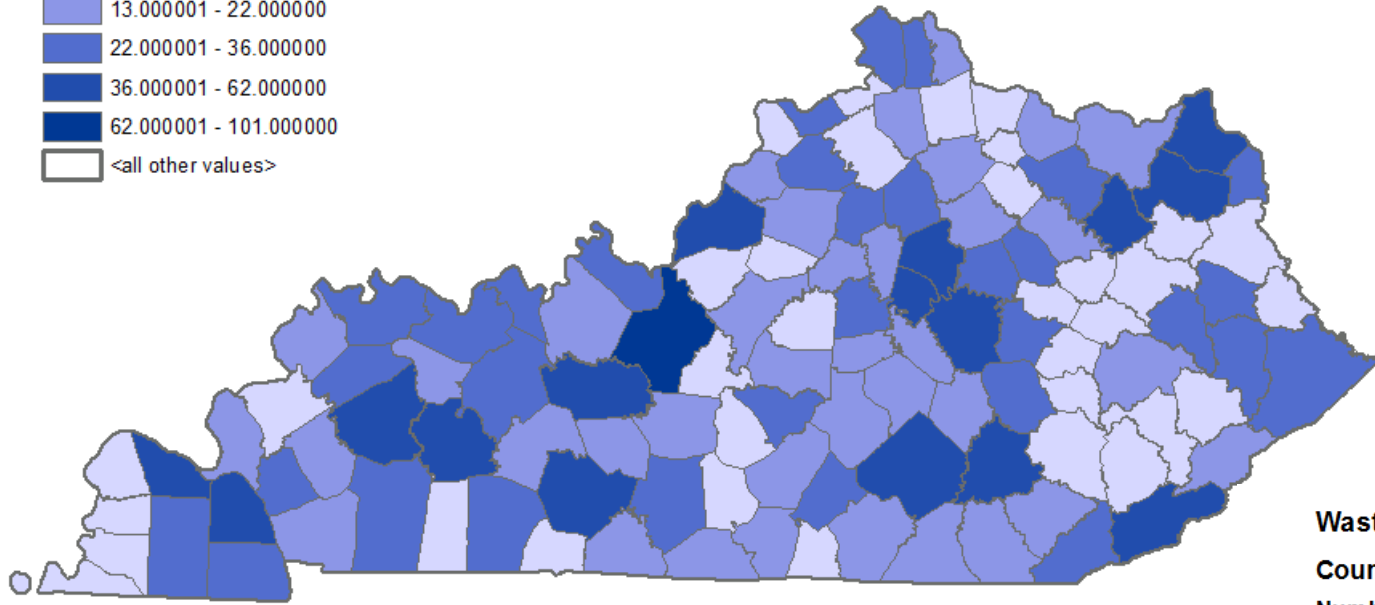
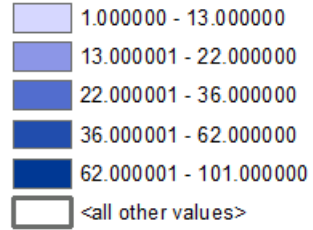
[View Table](#) : [View Chart](#) : [View Map](#)



Drinking Water Operators

County Boundary Polygons

Number

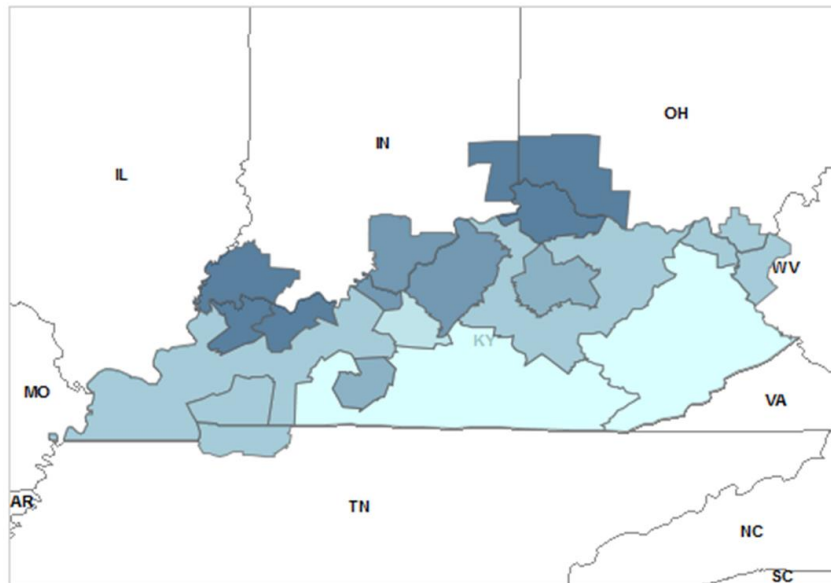
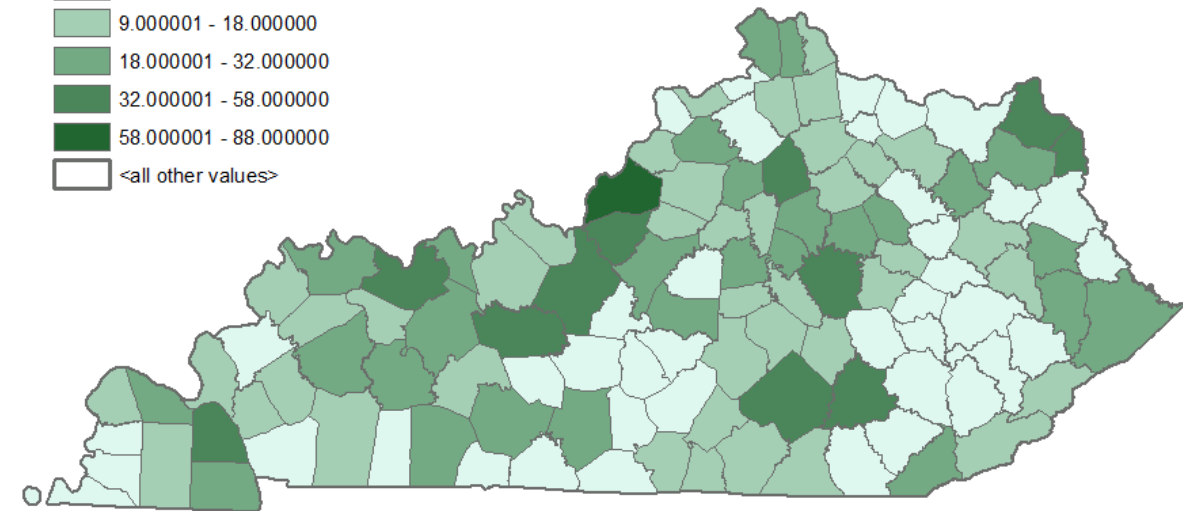
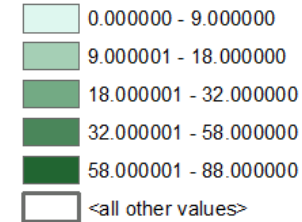


OPERATOR AVAILABILITY

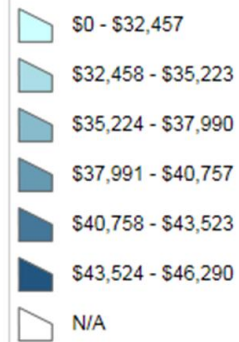
Wastewater Operators

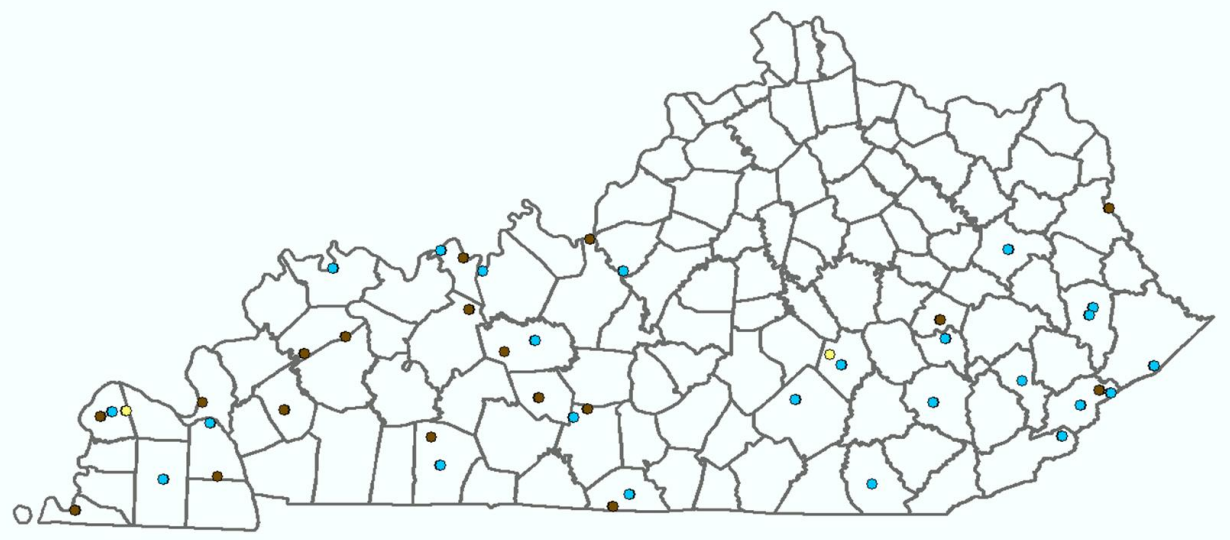
County Boundary Polygons

Number



Median Yearly Wage

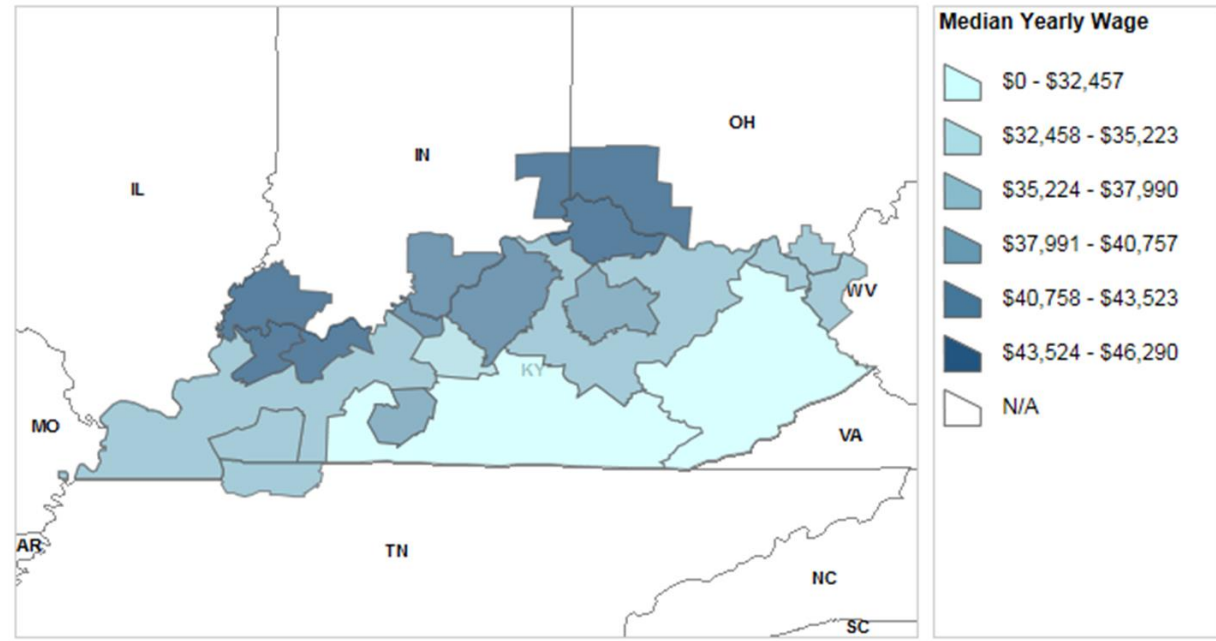


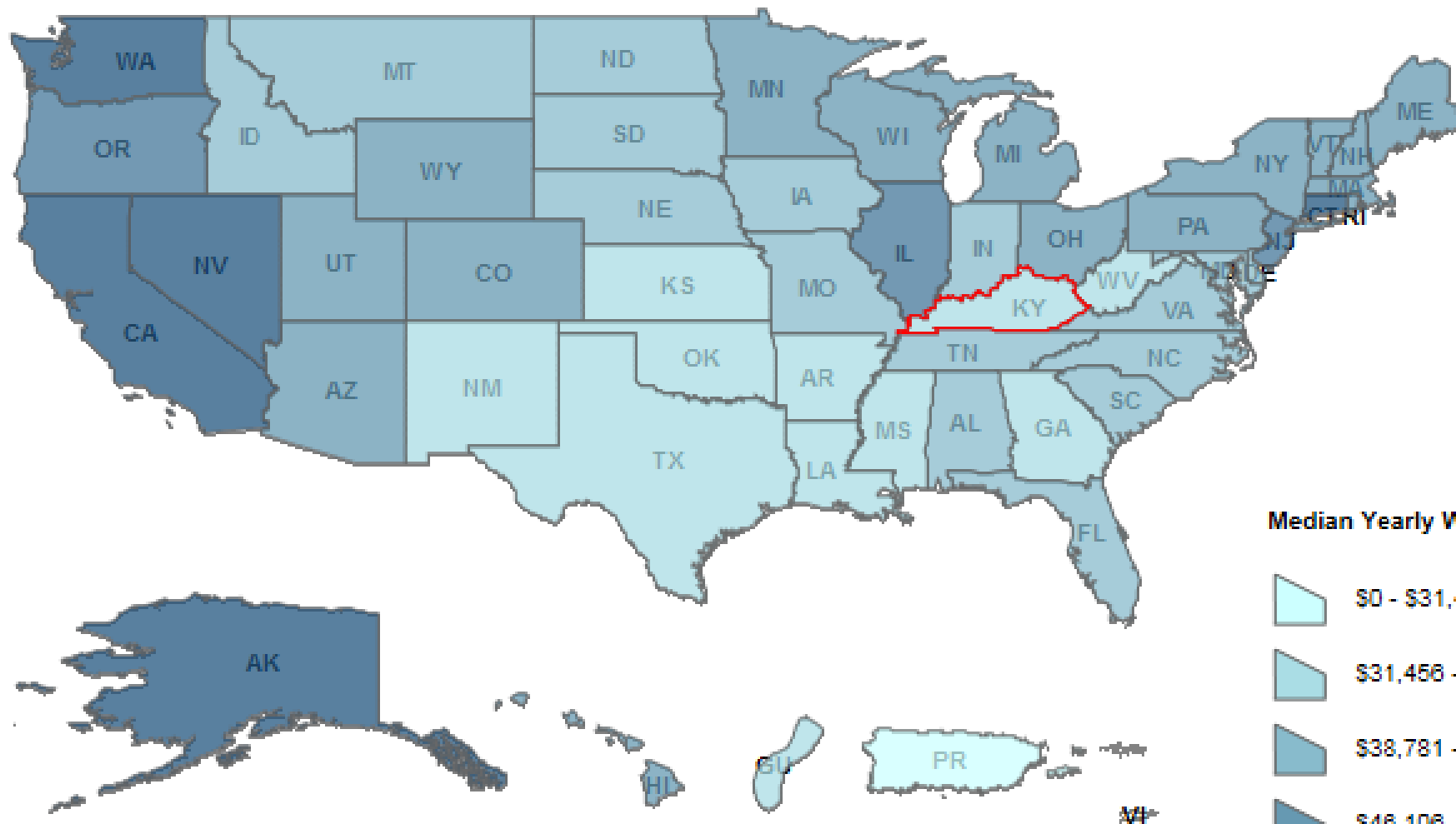


Median Yearly Wages for **Water and Wastewater Treatment Plant and System Operators** in **KENTUCKY**

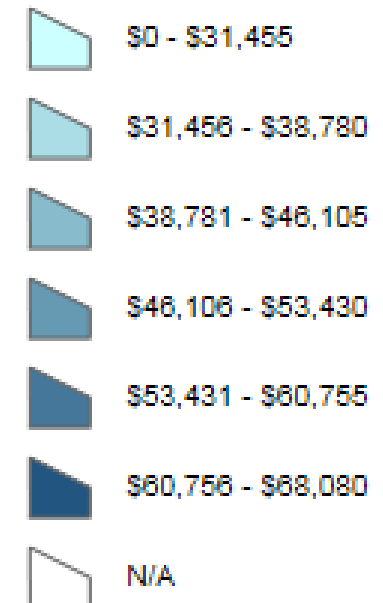
[View National Data](#) [View Hourly Wages](#)

[View Table](#) : [View Chart](#) : [View Map](#)





Median Yearly Wage



Median Yearly Wages of Highlighted Area(s):

Kentucky : \$36,690

4. FORECAST SUCCESSION PLANNING IMPACT

- Are you prepared if someone leaves?
- Do you know when your staff are eligible to retire?
- How much advance notice would you need?





Kentucky's public pension debt just got billions bigger

BY JOHN CHEVES

jcheves@herald-leader.com

MAY 18, 2017 10:41 AM

FRANKFORT —

On Thursday, the assumptions about government pay: assumptions for

Under the new r \$18.1 billion wi executive directo



About

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Big pension changes could be on the horizon

A major change could be coming to the County Employees Retirement System, one that will wreak havoc to city budgets. The Kentucky Retirement Systems Investment Committee is expected to recommend on Thursday that the KRS Board of Trustees make a significant cut in assumption rates for CERS and the Kentucky Employees Retirement System (KERS). The recommendations come after a study by investment consultants RVK, who reported to the committee Tuesday on the dire situation with the unfunded liability of KERS.

Rich Robben, the interim executive director of the KRS Office of Investments, told committee members results of the RVK report were used to set the recommendation that the rate of return should be changed from the current 7.5 percent to 6.25 percent. The KRS Board of Trustees is expected to act on that, along with recommendations to set the inflation rate at 2.5 percent and to change the payroll growth rate from the current four percent to zero. No information from actuaries was included in the report presented on Tuesday by RVK representatives and they told committee members they only reviewed the KERS model, not CERS.

WHO IS ELIGIBLE TO RETIRE?

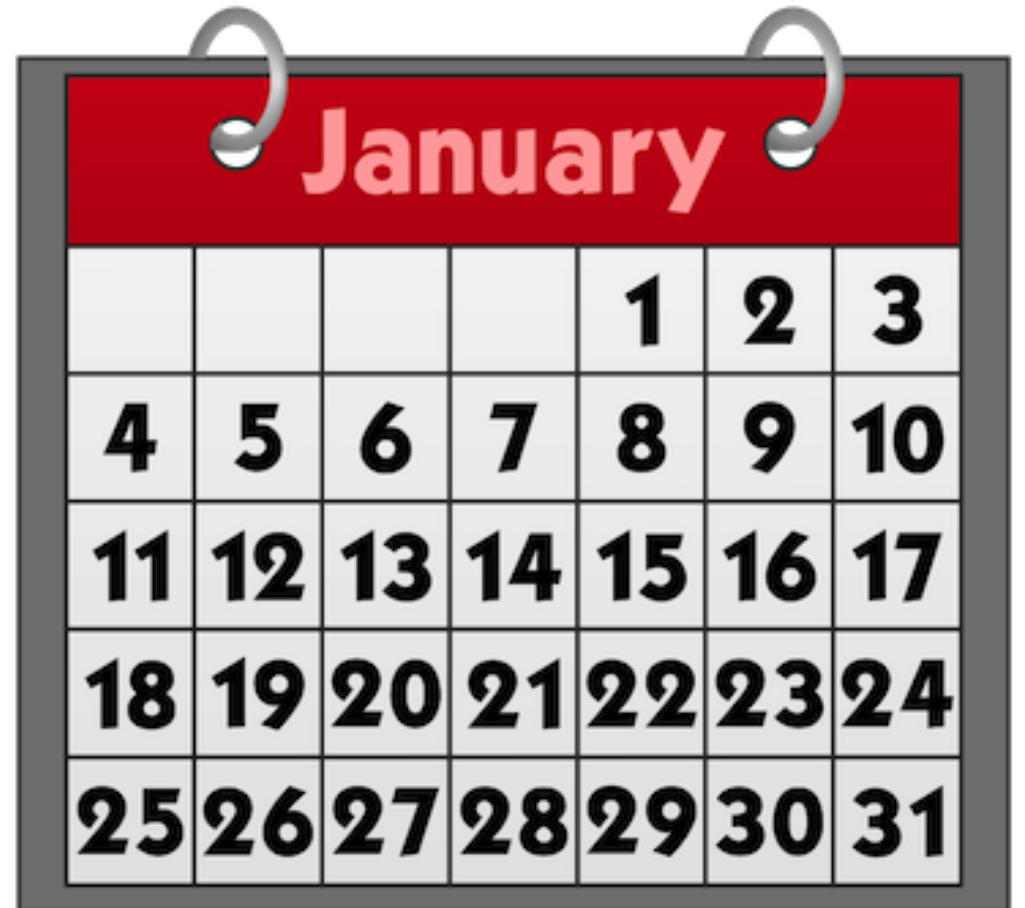
- Tier 1 (before 9/1/2008)–
 - Unreduced benefits at 65 or older with 4 years of service credit or 27 years of service credit at any age.
 - Reduced benefits at 25 years of service credit or 55 with at least 5 years of service credit.
- Tier 2 (9/1/2008-1/1/2014)–
 - Unreduced benefits at 57 or older if the age and years of service equal 87 (Rule of 87) or 65 with 5 years of service credit.
 - Reduced benefit with 60 or older with 10 years of service credit or if age plus years of service are greater than 77 but less than 87.
- Tier 3 (after 1/1/2014) – Member must be at least 57 and Rule of 87 or 65 with more than 59 months. No option for reduced benefit.

WHO IS ELIGIBLE TO RETIRE?

- Employees over 65, particularly if they have 10 years or more
- Employees over 55 with 20 years or more
- Employees with 22 years who might have purchased time (employed before 8/1/2002). These employees could be as young as 40!

5. EVALUATE AND REFINE SUCCESSION PLANNING

- Annually review your staffing plan.
- Review your plan if anyone leaves.



HOW DO WE GET THEM CERTIFIED FASTER?

- On the job training – start hiring now
- Education
- Apprenticeships

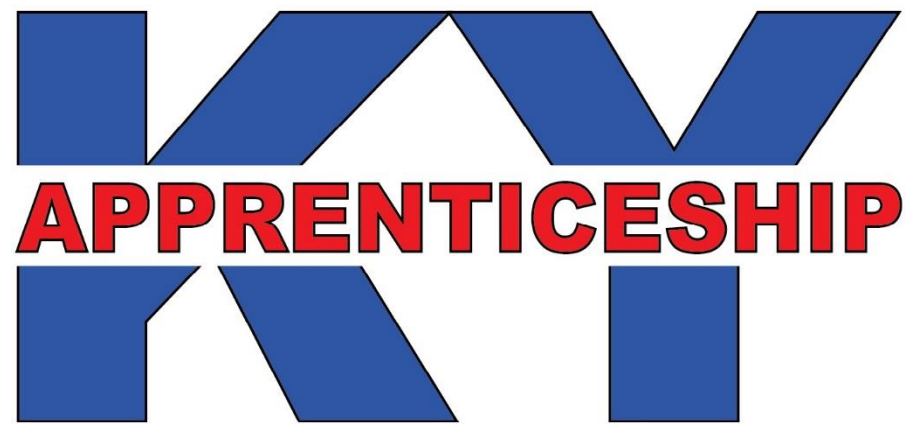


EDUCATION

- College courses
- Online training
- Correspondence courses

Kentucky Apprenticeship

Building Your Customized Registered Apprenticeship Program



*kentucky***TRAINED.** *kentucky***BUILT.**

WHAT IS A REGISTERED APPRENTICESHIP?

- Allows employers to design their own training program tailored to the company's needs.
- Apprentices EARN while they LEARN.
- Innovative employee training model that combines at least 2,000 hours of on-the-job learning with 144 clock hours per year of related technical instruction.
- Program completion results in highly skilled workers who receive a certificate from the federal Department of Labor.

BENEFITS FOR THE APPRENTICE

- Establish a great paying career with a reputable business.
- Earn a portable, nationally recognized credential
- Afforded the opportunity to expand skill set and advance career.
- Individuals who complete a Registered Apprenticeship program can earn approximately \$300,000 more over the course of their career!
- In many cases, incentives and other financial supports are available through the employer or education provider.

BENEFITS FOR THE EMPLOYER

- Ability to tailor the training to specifically meet company needs.
- Likely increased productivity and reduced turnover costs.
- “Grow your own” and establish a sense of loyalty with employees.
- Possibility to benefit from tax credits and other financial resources when available.



Commonwealth of Kentucky Labor Cabinet

Matthew G. Bevin, Governor

Derrick K. Ramsey, Secretary

FOR IMMEDIATE RELEASE

Contact: Alex Englen

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Prestonsburg City's Utilities Commission Creates New Apprenticeship Program

Prestonsburg, Ky. (February 13, 2018) – Labor Cabinet Deputy Secretary Mike Nemes joined officials from [Prestonsburg City's Utilities Commission](#) and [Big Sandy Community and Technical College](#) in Prestonsburg to announce the creation of a new apprenticeship program.

This three-year Registered Apprenticeship specializes in the occupations of Water Treatment Plant and Wastewater Treatment Operators. Apprentices will receive 2,000 on-the-job and 144 classroom training hours per year and will earn a nationally recognized journeyman certificate upon completion of the program.

The screenshot shows the Big Sandy Community and Technical College website. At the top, there is a navigation bar with links for Student Self-Service, User Account Center, E-mail, Blackboard, Help, and Contact Us. The main header features the college logo and the slogan "Go you!" with a "Go you!" graphic. Below the header, there is a search bar and a "APPLY NOW" button. The main content area is titled "Water / Wastewater Program" and includes a sidebar with a "Courses and Training" menu. The main text describes the program, its goals, and the courses offered. The sidebar menu includes items such as "Upcoming Training", "Courses and Training", "Aerobics", "Annual Surface Retraining", "Annual Underground Mining Retraining", "Basic Life Support for Healthcare Providers", "Basic Woodworking", "Body Shaping", "CPR First Aid", "Certified Fiber Optic", "Commercial Drivers License", "Community Education", "Driver's Education", "Healthcare", "Industry Training", and "24 HR Initial Surface Mine Training".

Student Self-Service | User Account Center | E-mail | Blackboard | Help | Contact Us

Big Sandy Go you!
Community & Technical College

APPLY NOW Google Custom Search

CURRENT STUDENTS | FACULTY & STAFF | ALUMNI | JOB-SEEKERS | VISITORS & COMMUNITY

ABOUT US | ACADEMICS | ADMISSIONS | COSTS & AID | STUDENT LIFE | GIVING | WORKFORCE SOLUTIONS | NEWS & EVENTS | EAST KY SCIENCE CENTER

Big Sandy Community and Technical College will be closed Monday, February 19th for President's Day.

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Big Sandy Community & Technical College >> Workforce Solutions >> Courses And Training >> Water / Wastewater Program

Courses and Training

- Upcoming Training
- Courses and Training
 - 7 Habits of Highly Effective People
 - 7 Habits of Highly Effective Teens
- Aerobics
- Annual Surface Retraining
- Annual Underground Mining Retraining
- Basic Life Support for Healthcare Providers
- Basic Woodworking
- Body Shaping
- CPR First Aid
- Certified Fiber Optic
- Commercial Drivers License
- Community Education
- Driver's Education
- Healthcare
- Industry Training
- 24 HR Initial Surface Mine Training

Water / Wastewater Program

The Water/Wastewater Treatment Plant Attendant program is designed to prepare individuals to enter the water quality field, in the area of water, wastewater, or water distribution. The first two courses provide background for students planning to enter the career field. The Special Topics courses satisfies the Kentucky Department of Labor's apprenticeship requirement for completion of a course of study in drinking water plant operator and/or wastewater treatment plant operator.

All classes count towards licensure for the Kentucky water and wastewater operator's certification test. With stackable credentials, student can also pursue an Associate's Degree.

Careers

Graduates of the Water/Wastewater Treatment Plant Attendant certificate include are well qualified for the following jobs.

- Water Treatment Plant and System Operators
- Wastewater Treatment Plant and System Operators

The First Two Courses

ENV 110 – Introduction to Environmental Technology

This course provides a background in the historical and current developments in environmental problems, solutions, strategies, and regulations. Students explore the various aspects of water/wastewater pollution prevention and control, and the role of regulation at the local, state, and federal levels.

ENV 293 – Special Problems I

Students in this program engage in management of water sources, laboratory analysis of water samples, operation of water/wastewater treatment facilities, maintenance of treatment facility equipment, and troubleshooting process problems.

- Classes will start October 11th.
- All courses will be offered online via Blackboard and Skype. Local classes will meet twice a month on the



QUESTIONS?

QUESTIONS?

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