## Dinsmore & Shohl

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October 16, 2007

Par to RD

<u>VIA HAND-DELIVERY</u> Hon. Beth O'Donnell

Executive Director Public Service Commission 211 Sower Blvd. Frankfort, KY 40601 PUBLIC SERVICE COMMISSION

#### Re: Application of Kentucky-American Water Company, a/k/a Kentucky American Water for Certificate of Convenience and Public Necessity Authorizing Construction of Kentucky River Station II ("KRS II"), Associated Facilities, and Transmission Line; Case No. 2007-00134.

Dear Ms. O'Donnell:

We have enclosed, for filing, the original and ten (10) copies of Louisville Water Company's response to Kentucky-American Water Company's motion to compel.

Thank you, and if you have any questions, please call us.

Very truly yours,

DINSMORE & SHOHL LLP

John E. Selent

ETD/lb Enclosures

cc: All Parties of Record (w/encl.) Barbara K. Dickens (w/encl.)

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#### **COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION**

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PERCENCION OF STREET

THE APPLICATION OF KENTUCKY-AMERICAN WATER COMPANY FOR A CERTIFICATE OF **CONVENIENCE AND NECESSITY AUTHORIZING** ) THE CONSTRUCTION OF KENTUCKY RIVER STATION II, ASSOCIATED FACILITIES AND TRANSMISSION MAIN

IN THE MATTER OF:

CASE NO. 2007-00134

#### LOUISVILLE WATER COMPANY'S RESPONSE TO KENTUCKY-AMERICAN WATER COMPANY'S MOTION TO COMPEL

Louisville Water Company ("LWC"), by counsel, hereby responds to the motion to compel filed by Kentucky-American Water Company ("KAWC") and states that it should be denied for the reasons set forth herein.

#### Response to the Specific Data Requests Referenced in KAWC's Motion. I.

KAWC's motion to compel disputes LWC's responses to the twenty data requests identified below. Most of these disputes could have been addressed informally between KAWC and LWC, had KAWC attempted to do so prior to filing its motion. The motion is meritless, and it should be denied for the reasons set forth below.<sup>1</sup>

KAWC's motion with respect to this request claims that KAWC Request No. 14: LWC did not provide minutes of the August 15, 2006 meeting of the Board of Water Works. Had KAWC attempted to contact LWC prior to filing its motion, it would have been informed

<sup>&</sup>lt;sup>1</sup> KAWC's claim that LWC did not identify the witness responsible for its responses to the discovery requests is meritless. At the time those discovery responses were filed, KAWC had only one witness in this matter, Greg Heitzman. Mr. Heitzman verified the responses to the discovery requests, thereby identifying himself as the responsible witness.

that the absence of those minutes was merely an administrative oversight. (Attached hereto as Exhibit 1 are the August 15, 2006 Board of Water Works minutes.)

<u>KAWC Request No. 15:</u> KAWC's motion with respect to this request implies that LWC is withholding documentation regarding communications with elected officials and that LWC should produce not only external correspondence but internal documentation, as well. Again, had KAWC attempted to contact LWC prior to filing its motion, it would have been informed that the vast majority of LWC's regular communications with elected officials occurs verbally, rather than in documentary form. Notwithstanding that, LWC agrees to review its internal documentation and – not later than the date (October 29, 2007) that its responses to the supplemental data requests are due – produce any internal documentation relating to communications with elected officials about the Central Kentucky water supply deficit.

<u>KAWC Request No. 17</u>: Request No. 17 exceeds the bounds of a data request by demanding that LWC reconcile two studies prepared by third-party experts. LWC attempted to answer this request to the best of its ability by noting that some of the differences in the referenced studies may be attributable to different methodologies and/or differing data sets.<sup>2</sup> LWC did not prepare those studies, and it would therefore be unduly burdensome and potentially a source of misinformation for it to attempt any more detailed reconciliation than what it has provided. The reconciliation should come directly from the sources of the reports. Thus, KAWC's motion with respect to this request should be denied.

<sup>&</sup>lt;sup>2</sup> KAWC took an even less detailed approach in answering request 16(a) in the First Supplemental Data Requests of Citizens for Alternative Water Solutions. The request asked KAWC to, "Please explain the methodology used by O'Brien and Gere... that was used to modify the '2004 Feasibility Study." Despite relying on and having analyzed and considered that study, KAWC responded only that "We do not have any information with which to answer this question." (*Id.*)

<u>KAWC Request No. 19:</u> KAWC's motion with respect to this data request complains that LWC has provided "nothing in the way of the rationale and basis for predicting declining industrial sales." (*Id.*) This is simply not true. Page 2 of the referenced Cerrito report (attached hereto for the Commission's reference as Exhibit 2) explains precisely how the projected decline in LWC's industrial water sales was forecast. Again, the Cerrito report was prepared not by LWC, but by a third-party. LWC has answered the data request to the best of its ability by referring KAWC to the detailed information provided in the Cerrito report. Accordingly, KAWC's motion with respect to this request should be denied.

<u>KAWC Request No. 24:</u> The basis for KAWC's motion with respect to this data request is that KAWC believes LWC has data showing the maximum monthly demand for each year between 2001 and 2006 by customer class for each month. As LWC explained in its response to this data request, it "does not track the maximum monthly demand by customer class." (*Id.*) LWC does not have the requested data. Therefore, KAWC's motion with respect to this request should be denied. In the spirit of cooperation, however, LWC notes that it does track actual consumption by customer class, and documentation showing consumption by customer class from 2001 to 2006 is attached as Exhibit 3.

<u>KAWC Request No. 27</u>: Request No. 27 seeks data regarding "presentation(s) to industries[.]" (*Id.*) "Industries" are different than individual "customers." In Request Nos. 22 and 23, KAWC sought information regarding "the maximum [monthly and day] demands for each of [the] top 50 industrial <u>customers</u>." (*Id.* (emphasis added).) Thus, when KAWC changed its terminology in Request No. 27 to seek data regarding "existing industries" (with no mention of individual customers), LWC construed this language to mean that KAWC was no longer referring to customers. Accordingly, LWC answered that it does not serve industries. Now that KAWC has provided clarification of the meaning of this Request, LWC will – not later than the date that its responses to the supplemental data requests are due – review and provide any information from the prior three years with respect to the recruitment of new industrial customers. LWC further notes that potential industrial sales are not factored into LWC's industrial demand forecast prepared by Dr. Patricia Cerrito.

<u>KAWC Request No. 34:</u> KAWC's motion with respect to this request complains that LWC did not answer the second subpart of the request. Again, had KAWC contacted LWC prior to filing its motion, LWC would have informed it that the answer to that question is already contained in the responses to Request Nos. 33 and 35. KAWC's motion with respect to this request should therefore be denied.

<u>KAWC Request No. 42(b)</u>: KAWC's motion with respect to this request complains about LWC's objection to the use of the term "unaccounted for water" and an alleged failure to respond to the request. Again, had KAWC contacted LWC prior to filing this motion, it would have been informed that the objection contained in response to Request No. 42(b) was an editing oversight and that LWC had no objection to the term "unaccounted for water." In any event, LWC's response states that its current unmetered water is 15.5% for 2006; 14.5% for 2005; 15.5% for 2004; 16.2% for 2003; 15.2% for 2002; and 15.0% for 2001. While LWC did not specifically identify the percentage used for future demand forecasts, that answer is 15.0% contained in LWC's twenty year facilities plan (the "2002-2021 Facilities Plan"). See Exhibit 4.

<u>KAWC Request No. 43:</u> KAWC's motion with respect to this request complains that LWC has not addressed any projected production shortfalls. Again, this dispute could have been easily resolved had KAWC attempted to contact LWC prior to filing its motion. First, KAWC is incorrect that LWC's response is confined to current production capacity. To the contrary, LWC states (without qualification) that "it does not have a production shortfall as shown in the documentation produced in response to data request number 50." (*Id.*) The documentation produced in response to data request number 50 addresses both current and future production capacity. In light of this response, the second subpart of this request is inapplicable. KAWC's motion with respect to this request should therefore be denied.

KAWC Request No. 46: The dispute with respect to this request relates to KAWC's complaint that LWC has not provided the status, schedule, total project cost, and individual component costs of each and every project either recommended or undertaken as a result of the 2002-2021 Facilities Plan. KAWC did not limit this request to projects of a certain In response, LWC objected that such an unrestricted request is unduly magnitude/cost. burdensome. LWC undertakes hundreds of projects each year. Furthermore, any information that could be gleaned from forcing LWC to filter the requested information from this multitude of projects would do nothing to help KAWC explain why - despite its Commission-ordered obligation to present a reasoned solution to Central Kentucky's water supply deficit – it turned a blind eye to the Louisville Pipeline. Had KAWC contacted LWC prior to filing this motion, it is possible that the parties could have made arrangements for LWC to provide the requested information for a certain reasonably (that is, significantly) restricted set of projects similar in magnitude to the Louisville Pipeline. Given this failure, however, it appears that KAWC's real goal is not to discover useful information, but to drown LWC in discovery matters. Absent any expressed legitimate need for the requested data, KAWC's motion should be denied.

<u>KAWC Request No. 53:</u> This dispute involves KAWC's request for an electronic version of LWC's cost of service study (with formulae intact). LWC provided a copy of the requested study in electronic format; it did not provide the electronic formulae. KAWC claims it

needs the formulae so that "the Commission and KAW can determine the rate effect on LWC's customers." (Motion to Compel at 8.) The Commission has no jurisdiction over the rates LWC charges to its customers. The only potential jurisdiction the Commission has relates to its jurisdiction over whatever contract KAWC may ultimately sign with LWC. In any event, Mr. Heitzman's rebuttal testimony (filed ten days prior to receipt of KAWC's motion) specifies the exact rate that LWC would charge to KAWC pursuant to the Louisville Pipeline proposal. Cost studies might have been useful to KAWC if the proposed LWC rate were uncertain, but Mr. Heitzman's rebuttal testimony closes the door on this argument. Any other rates are outside the jurisdiction of the Commission. As a consequence, Mr. Heitzman's testimony makes the LWC cost study irrelevant, and it therefore also extinguishes KAWC's alleged need for the electronic formulae used in generating that study. KAWC's request should therefore be denied.

<u>KAWC Request No. 61:</u> The dispute with respect to this request relates to KAWC's claim that LWC has not provided detailed "project schedules" for the Louisville Pipeline proposal. LWC's response to this request explains that LWC has not completed detailed final designs for the Louisville Pipeline. KAWC knows that LWC has not completed these detailed final designs because KAWC has yet to contact LWC to discuss the possibility that the Louisville Pipeline presents a better solution to Central Kentucky's water supply deficit than the proposed KRS II water treatment plant and related facilities. Nevertheless, given the Commission's and the parties' interest in the evaluation of the Louisville Pipeline proposal, LWC has filed rebuttal testimony of Mr. Heitzman that addresses construction scheduling matters in as much detail as possible at this point. Had KAWC contacted LWC prior to filing its motion, LWC could have pointed KAWC to that scheduling information in Mr. Heitzman's rebuttal testimony. Accordingly, KAWC's motion should be denied.

<u>KAWC Request No. 63:</u> KAWC's motion with respect to this request relates to LWC's alleged failure to provide a cost breakdown for the Louisville Pipeline proposal. LWC's response to this request referred KAWC to, among other things, "the R. W. Beck report that LWC previously produced in response to the Commission's open records request." (*Id.*) KAWC must have overlooked this additional reference to the R. W. Beck report because that report provides detailed information regarding the various components of the Louisville Pipeline proposal. Once more, if KAWC had contacted LWC prior to filing its motion, LWC could have clarified this matter informally. This aspect of KAWC's motion should be denied.

<u>KAWC Request No. 68:</u> KAWC next seeks to compel LWC to provide information regarding "the basis for the assertion that LWC could use the Interstate 64 right-of-way/controlled access for a longitudinal installation of a water pipeline[.]" (*Id.*) LWC's response clarified that the data request assumed too much. As LWC stated, "[t]he Louisville Pipeline proposal includes or considers a route <u>either within or parallel to</u> the I-64 right-of-way." (*Id.* (emphasis added).) LWC does not definitively claim that the Louisville Pipeline will be installed in the interstate right-of-way, although the other data requests referenced in LWC's response acknowledge that use of the interstate right-of-way <u>could</u> be possible. Access to the interstate highway has not been refused to LWC. KAWC's motion should, therefore, be denied in this respect.

LWC also clarifies that its response referencing preliminary discussions with District 5 Highway Dept. officials regarding the widening of I-64 in Jefferson County occurred between LWC staff and District 5 staff. In addition, LWC notes that LWC has requested a meeting with Matt Bullock (District 5 Engineer) to discuss water projects that impact road projects. LWC further clarifies that its response referencing "discussions with highway design consultants regarding the feasibility of constructing utilities in the right-of-way" relates to verbal discussions with QK4 Engineers, GRW Engineers, and CDM Engineers.

KAWC further takes issue with the lack of <u>internal</u> communications produced by LWC in response to this data request. Given KAWC's request that LWC produce all "documents and <u>correspondence</u>" related to this interstate right-of-way issue, LWC believed KAWC sought only external communications regarding the potential use of interstate rights-of-way. (*Id.* (emphasis added).) While a telephone call prior to filing this motion could have resolved this issue without dispute, LWC will review its files to determine whether any such <u>internal</u> documents exist. In the event any such documents are discovered, LWC will produce them by not later than the date that its responses to the supplemental data requests are due.

<u>KAWC Request No. 79:</u> KAWC claims that the dispute regarding this request involves LWC's alleged mischaracterization of the request for "any and all hydraulic analyses... for the [Louisville Pipeline] from the LWC treatment plants to the Fayette County, Kentucky location selected by LWC...." (*Id.*) LWC responded that it "has not conducted a detailed hydraulic analysis for the Louisville Pipeline from the LWC treatment plants to Fayette County." (*Id.*) LWC recalls that KAWC's performed an extensive analysis of the Bluegrass Pipeline and determined it feasible in 1998. LWC simply has not conducted any hydraulic analysis, detailed or not, and consequently, KAWC's motion should be denied with respect to this request.

<u>KAWC Request No. 80:</u> KAWC's motion with respect to this request once again takes issue with LWC's use of the word "detailed." As before, LWC's use of the word "detailed" was not intended to signify that there were any "less than detailed" such analyses; it was merely a reflection of the fact that "less than detailed" hydraulic analyses would not add value to KAWC's own prior determination that the Louisville Pipeline proposal was technically feasible. Given the lack of any such analysis, this request is inapplicable. KAWC's motion with respect to this request should therefore be denied.

<u>KAWC Request No. 85:</u> KAWC's motion with respect to this request is based entirely upon its belief "without question" that "there must be other documents" than the board meeting minutes and R. W. Beck study that LWC produced. (*Id.*) The Board of Water Works, an entity subject to the Kentucky Open Meetings Act, KRS Chapter 61 et. seq., does not act to approve anything via email communications. Therefore, the BOWW's actions taken are reflected only in official minutes of the BOWW. Furthermore, discussions regarding a specific proposal may be held in closed session of a public agency pursuant to KRS 61.878 (1)(g), and as such, the Executive Leadership Team would not address such an item in an open meeting or in its minutes.

. <u>KAWC Request No. 89:</u> KAWC's motion with respect to this request repeats its complaint that it sought <u>any</u> "proposed metering configuration at the termination of the [Louisville Pipeline,]" and not merely a "detailed" metering configuration at the same location. (*Id.*) LWC responded that it "has not performed a detailed, final design (including metering configuration) for the transmission system to Fayette County." (*Id.*) LWC nevertheless referred KAWC to its 1998 Water Supply Agreement with LWC. (*See id.*) That agreement addresses potential metering configurations. Mr. Heitzman's rebuttal testimony also addresses this issue. Furthermore, LWC has attached as Exhibit 5 its standard metering configuration. It is not clear what more information KAWC seeks given its failure to make a good faith investigation of the Louisville Pipeline. LWC has responded to the request with the best metering configuration available to it, and KAWC's motion should be denied with respect to this request.

<u>KAWC Request No. 117:</u> KAWC's motion with respect to this request relates to the lack of <u>internal</u> documents produced by LWC in connection with the request for documents that focus on "negotiations <u>between</u> [KAWC] and LWC since January 1, 1994 regarding [KAWC]'s purchase of water or water-related services from LWC." (Request No. 117.) LWC referred KAWC to documents regarding those negotiations, but given the focus on negotiations <u>between</u> KAWC and LWC, it did not interpret this request to seek e-mails and other internal documents. Internal documentation regarding negotiations for the Bluegrass Water Project that KAWC abandoned are irrelevant, anyhow, in light of the current proposal contained in Mr. Heitzman's rebuttal testimony. In addition, KAWC has not negotiated for the purchase of water from LWC since long before Mr. Heitzman's proposal was made in this matter. Accordingly, the burden of forcing LWC to attempt to gather internal documentation from 1994 through approximately 2000 (and with respect to a project that is not even being proposed herein) grossly outweighs the potential value associated with the production of such documentation. KAWC's motion should therefore be denied with respect to this request.

<u>KAWC Request No. 121:</u> KAWC's motion with respect to this request claims that LWC's answer is not "specific" enough regarding the proposed Fayette County termination point of the Louisville Pipeline. LWC identified a proposed termination point of the intersection of Newtown Pike and Ironworks Pike in Fayette County. The same information was provided in both the direct and rebuttal testimony of Mr. Heitzman. If this response somehow lacks specificity, it results only from the fact that KAWC has refused to reasonably evaluate or otherwise conduct any discussions with LWC regarding the Louisville Pipeline proposal. LWC's response is specific, and KAWC's motion should be denied with respect to this request.

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The Commission should deny KAWC's motion to compel.

#### II. Response to the Remedies Requested in KAWC's Motion.

In addition to the foregoing, KAWC requests that: (i) the Commission order LWC to pay \$991.29 for two duplicate sets of paper copies that KAWC made from LWC's electronicallyproduced documents; and (ii) the Commission strike LWC's rebuttal testimony if any alleged deficiencies in responding to KAWC's discovery requests are not cured "immediately." Each of these requests should be denied.

KAWC's request that LWC pay for paper copies of documents that it already produced is unreasonable. LWC is only compelled to produce true and accurate copies of responsive documents, and the CD produced in conjunction with its narrative responses to KAWC contains such copies. The cost associated with creating approximately 20 sets of paper copies would have approached ten thousand dollars. Moreover, many people prefer the advantage of being able to transport and review thousands of pages of documents on a single CD, from which isolated paper copies can be created as needed. LWC has a right to control its expenses in this litigation, and it is not unreasonable for LWC to produce a voluminous quantity of documents in electronic form, especially given the ubiquity of computers capable of reading .pdf files. If KAWC's counsel chose to incur unnecessary expenses in connection with reviewing those documents, those expenses must remain with KAWC's counsel.

Finally, notwithstanding KAWC's failure to confer with LWC prior to filing its motion, KAWC also asks the Commission to take the harsh step of striking LWC's rebuttal testimony. This would be inappropriate for several reasons. First, the appropriate remedy for a motion to compel is compulsion. Only in the unlikely event that a party refused to heed an order granting a motion to compel would there arise any question regarding possible sanctions against that party. Even then, there must be some relation between the harm alleged caused and the remedy invoked. LWC's rebuttal testimony, however, has no relationship to KAWC's discovery requests. That testimony was a response to the testimony of Scott J. Rubin, who testified on behalf of the Attorney General of the Commonwealth of Kentucky (not KAWC). Furthermore, the Commonwealth would not be well-served by pretending (as KAWC requests) that LWC has not: (i) made a definitive proposal to solve the Central Kentucky water supply deficit; and also (ii) provided a definitive analysis of why the Louisville Pipeline is more cost-effective than the KAWC proposal over any timeframe. Consequently, the Commission should not strike LWC's rebuttal testimony.

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For all the foregoing reasons, the Commission should deny KAWC's requests for additional remedies.

#### III. Conclusion.

In conclusion, KAWC's motion is merely an attempt to distract the Commission's attention from the real issue in this case: KAWC's failure to consider the best solution to Central Kentucky's water supply deficit and its resulting disservice to the public convenience and necessity of the Commonwealth. LWC seeks to compete for the privilege to work with other water providers to serve the water needs of Central Kentucky. KAWC's initial data requests to LWC, alone, approached the same number of requests and supplemental requests KAWC received from the Commission and all the parties combined. LWC nevertheless worked diligently to completely and adequately respond to those excessive requests. KAWC is free to cross-examine LWC at the hearing in this matter, but it cannot compel LWC to create answers

when answers do not exist. For all of the foregoing reasons, the Commission should deny KAWC's motion.

Respectfully submitted,

Bench to Duckens

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-and-

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Counsel to Louisville Water Company

#### **CERTIFICATE OF SERVICE**

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#### BOARD OF WATER WORKS REGULAR MEETING MINUTES AUGUST 15, 2006

Board Members Present: Mr. Stewart Conner, Chair Mr. Gerald Martin Ms. Margaret Harris Ms. Marita Willis Dr. Joseph Wise

Not Present: Mayor Jerry Abramson Ms. Wendy Welsh, Vice-Chair

Others Present: Mr. John Huber, President/CEO Ms. Barbara Dickens, Vice President, General Counsel and Secretary Mr. Greg Heitzman, Senior Vice President, Operations and Chief Engineer Ms. Susan Lehmann, Vice President, Human Resources and Organizational Effectiveness Mr. Robert Miller, Vice President, Treasurer Ms. Karla Teasley, Vice President, Customer Service and Business Development Mr. James Brammell, Director of Engineering and Planning, Assistant Chief Engineer Mr. Edward Chestnut, Assistant to the President and Director of Corporate Measures Ms. Barbara Crow, Process Owner, Providing Strategic Communications

The regular meeting of the Board of Water Works was held on Tuesday, August 15, 2006 at the Louisville Water Company, 550 South Third Street, Louisville, Kentucky. Chairperson Stewart Conner called the meeting to order at 12:35 p.m.

#### Minutes from the Previous Special-Called Meeting Reviewed and Approved

Mr. Gerald Martin moved to approve the minutes from the Special-Called Meeting held July 19, 2006, seconded by Ms. Margaret Harris, and the motion carried.

#### **Chief Executive Officer Report Provided**

Mr. John Huber advised staff have resolved the issue with the customer who wrote a letter to all the board members. Staff has returned to do additional restoration of her yard.

Mr. Huber advised Mr. Greg Heitzman had been reappointed to the Kentucky Infrastructure Authority as the representative from the American Water Works Association, Kentucky/Tennessee Section.

#### **Financial Report Provided**

Mr. Robert Miller reminded the Directors that in last month's report, he stated we should be able to meet earnings projections assuming a number of factors were also met. However, for the month of July 2006, consumption is down even lower than expected and operation and maintenance expenses are unusually higher than expected. As a result, net income is down is \$756,545 or 24.6% less than budgeted for the month and \$807,874 or 25.9% less than July 2005. One component affecting operation and maintenance

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expenses is an adjustment to the physical inventory count of approximately \$372,000. Mr. Miller stated we need to ensure proposed budget reductions occur and to critically evaluate expenses that appear to not be following traditional cost drivers. Mr. Miller stated the dividend target is of concern at this point and staff is evaluating how to address any potential shortfall. Mr. Huber discussed the inventory adjustment, in that we must decide whether to operate a partial or full warehouse, outsource our warehouse operations, or to allow contractors to get materials directly from vendors, which will result in their paying sales tax that will be passed on to LWC. This issue will be discussed again by the Audit Committee at its next meeting.

Dr. Joseph Wise commented that many of the recommended approaches are short-term solutions, but we should focus on long-term solutions to variable revenue. Mr. Huber stated some of the solution is how we structure our costs and how we budget our sales. Mr. Conner agreed we need to deal with the problem more comprehensively. Mr. Martin commented providing stability to our revenues is exactly why we need to consider the new business opportunities.

#### **Operations and Engineering Report Provided**

Mr. Heitzman presented the Operations report for July. Due to higher rainfall, the average production rate last month was significantly lower than that of the same period in 2005. The average production rate during July was 141.3 MGD, an 8.4 percent decrease from the July 2005 production of 154.4 MGD and a 4.8 percent decrease from the July five year average production of 148.5 MGD. For the year to date, production was 5.4 percent lower than 2005 and 3.1 percent lower than the five year average.

Mr. Heitzman advised we issued an area wide Boil Water Advisory generally within the areas bounded by Westport Road, Herr Lane, Goose Creek, and Highway 42 on July 31, when system pressures dropped below 20 psi due the simultaneous occurrence of the Standard Country Club Tank draining unexpectedly and the backup pressure supply valves not opening properly during the event. There was no known contamination of the system and the BWA lasted 24 hours. It appears this event was preventable, and appropriate corrective actions will be taken to prevent similar incidents from occurring in the future.

Mr. Heitzman reported staff met with the Community Advisory Group (CAG) regarding alternative chlorine systems at the Crescent Hill Filtration Plant on August 4. The CAG agreed with LWC that the 0.8 percent on-site chlorine generation system is the best alternative for the community and the Company, which is a component of the remaining three alternatives for consideration (2A, 2B, and 2C). However, the CAG has not reached consensus with LWC on the location of the on-site generation facility. LWC staff recommends building the facility at the open space across the reservoir (Alternative 2A) based on the evaluation of safety, operations and maintenance reliability, logistics, engineering design elements and constructability. On the other hand, the CAG has an interest in preserving the open space. The CAG requested additional information regarding Alternative 2C, which involves construction of a new on-site generation building near the fluoride and paint, oil, and lubricant buildings and construction of a new coagulant feed and storage building south of coagulation basin number 7. The CAG will likely reach consensus on a preferred alternative and develop final recommendations to the Board at the next meeting scheduled on August 21. Additionally, the CAG has requested 30 minutes on the Board of Water Works agenda in September to present their recommendation. Mr. Conner commented that the Board would provide the amount of time for presentation that it has generally allowed outside groups per past practice.

#### Serving Customers Report Provided

Ms. Karla Teasley provided the Serving Customers report for July 2006. A cross-functional team was chartered to plan, budget and implement a pilot program for residential/commercial monthly billing in the portion of LWC's service area where automated meter reading technology is installed. These areas

Board of Water Works August 15, 2006 Regular Meeting Minutes Page 2 of 9 include Goshen, Shepherdsville and Kentucky Turnpike #2 and contain approximately 8,000 accounts. The team held its first meeting and is collecting benchmarking data from other water and sewer utilities on their billing and collection practices. The pilot is anticipated to start implementation in 2007.

Staffing Levels in Customer Service continue to be low while we are attempting to fill vacant positions. The following additional steps have been taken to meet minimum operational requirements: the Process Owner of New Service Applications has been assigned as interim Process Owner of the Call Center; overtime is being utilized throughout the system; two retirees have been hired; staff with customer service experience from the Distribution Operations, Water Quality, and Metering Services Systems are assisting in the call center and cashiering processes; all system managers are assisting with customer callbacks, working extended hours or handling additional duties to meet our customer needs. Impacts to daily operations have been extended time in completing customer callbacks, increased cycle times in processing new service applications, increased average call wait time and increased number of abandoned calls.

Staff presented a proposal for a No Interest Tapping Fee Loan Program to the Customer Advisory Council (CAC) and to the Bullitt County Advisory Board. This program is designed to help customers with limited financial resources or other defined financial hardships to apply for a no interest tapping fee loan and mortgage with LWC. The proposal provides for a third party firm to screen applicants under the program. Eligibility criteria would require family income of less than 150% of the Federal Poverty Guidelines and limited assets other than their primary home and transportation. Staff estimates between 10 to 20 families would qualify in any given fiscal year. Both the CAC and the Bullitt County Advisory Board provided positive feedback on the proposal and offered constructive insights on eligibility criteria.

Over 300 industrial and commercial customers received a bill credit communication. Letters explaining the overcharge were mailed to customers with credits over \$100. Call Center impact was minimal.

#### Human Resources Report Provided

Ms. Susan Lehmann provided the Human Resources report. The existing Drug and Alcohol Policy is being expanded and staff expects the new provisions to be implemented in the near future. The current policy prohibits LWC employees from misusing alcohol and/or controlled substances while engaged in work-related activities. Testing is conducted for alcohol and/or controlled substances in pre-employment, post accident, post injury and reasonable suspicion situations. The policy affects all individuals applying for employment as well as full and part time LWC employees. The expanded policy will continue to include the current testing and will also include random drug testing for all employees in safety sensitive positions.

The Organization Effectiveness Index (OEI), a survey tool used every three years to help management assess ten key areas strategic to the organization, was conducted and results were recently received. One survey statement, "Overall, I am satisfied with my job at LWC", is used as a Shared Goal among the ELT. A lower score is considered a higher rating. In 2006, the statement was rated at 2.55, down from the 2.4 rating in 2004. This difference has been determined to be statistically insignificant and both scores are considered to be very good scores.

#### Closed Session Held

Mr. Martin moved to go into closed session to discuss proposed or pending litigation pursuant to KRS 61.810(1)(b), respectively, at 1:28 p.m. Dr. Wise seconded, and the motion carried.

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#### **Open Session Resumed**

On the motion of Mr. Martin, seconded by Dr. Wise and unanimously carried, the Board resumed open session at 1:41 p.m. No action was taken in closed session.

#### Audit Committee Report Given

Dr. Wise summarized the discussions held at the Audit Committee meeting on June 21, 2006. Mr. LeMaster conducted a Compensation Audit and found an adequate control structure in place to effectively manage the compensation & benefits program, but recommended strengthening controls in some areas. Specifically, attention should be paid to ensuring that adequate equities exist between positions and job incumbents internally just as has already been done with the external market. Mr. LeMaster recommended adjusting employees from the Developmental zone to Market after an established amount of experience and acceptable levels of performance; making business system managers responsible for reviewing job descriptions in their areas of supervision on a regular basis and submitting revisions to Human Resources, and holding Senior Compensation Committee meetings regularly to review internal pay equities for non-union employees across the company. Management disagreed with automatically advancing employees from the developmental to market zone after a number of years and acceptable performance, because other factors should also be considered when determining appropriate pay, but agreed to refer this concern to the outside consultant for consideration in how to address employees who remain in the developmental zone for an extended period. Management agreed with the other two recommendations.

Mr. Jim Smith provided a status update of the recommendations from the 2005 Annual Inspection conducted by Black & Veatch Engineering Consultants. To date, 77 out of the 87 agreed-upon recommendations have been addressed with solutions either completed (31%), in progress (25%), or planned (32%).

Dr. Wise advised Jim Brammell reported on the review of controls for the capital program. Specific findings were a lack of understanding about project authorization rules, failure to properly document, failure to hold staff accountable for not following procedures, and failure to properly transition projects when a Project Manager left the company or changed positions. Mr. Brammell prepared an action plan to address these deficiencies in LWC's capital program.

In the General Controls and Risk Assessment audit, Mr. LeMaster determined internal controls were sufficient to adequately mitigate material risks to the organization, but further strengthening of controls is recommended in the areas of comprehensive business planning, adequate capacity for water production, treatment and storage, documentation of voluntary compliance with substantive components of section 404 of Sarbanes-Oxley Act of 2002, warehouse management, staffing levels, cross-system communications, and employee training and development.

Mr. LeMaster also updated the Committee on the status of outstanding issues from prior audits.

Mr. Miller provided information to the Committee regarding efforts made to plan for business continuity and disaster recovery.

#### Strategic Plan, Strategy V: Growth Discussed

Mr. Huber provided an overview of the fifth strategy in the revised Strategic Plan, which addresses growth.

Board of Water Works August 15, 2006 Regular Meeting Minutes Page 4 of 9 Mr. Miller discussed the sub-strategy related to economic development. He stated it will be difficult to attract a major new industrial customer to Jefferson County due to the restrictions on additional air pollution; opportunities for recruitment of new large water users will be quite limited. Local economic development officials and advisors have concluded that LWC's role is important but not a key driver in attracting and retaining businesses and that the community's interests are served best by LWC providing high quality products and services at competitive prices. LWC does not intend to focus efforts on direct recruitment of potential new industrial customers or providing economic incentive packages. Instead, LWC will focus on (1) improving communications with existing customers, (2) increasing involvement in local economic development planning, (3) improving ease of access and use of information for developers and site consultants, and (4) increasing awareness of LWC's role in local economy for local leadership groups.

Ms. Teasley discussed the sub-strategy related to horizontal and vertical integration opportunities. First, we would need to develop and implement a strategy innovation process with dedicated resources. Then, LWC needs policies and controls in place to evaluate new business opportunities on a continuing basis. We will need an increased ability to obtain and maintain customer and business information, expertise and technology and an environment to support new business initiatives. Ms. Teasley stated some business opportunities potentially low risk and involves low cost to the company to implement. Mr. Conner stated we need to conduct feasibility studies to determine whether they are opportunities we should pursue or not.

Mr. Heitzman discussed the regionalization opportunities. This is really an extension of what LWC already pursues. The current policy allows us to extend our system to contiguous areas where it is mutually acceptable and advantage to both entities. Staff recommends we strengthen key business relationships to allow growth more quickly and to consider non-traditional means of extension through mergers, acquisitions joint ventures and management contracts. To do this, certain tasks need to be completed in preparation. We need to conduct a transmission capacity study to definitively determine our current system capacity, complete a profile and prioritization of growth opportunities, and consider what corporate model would be used for growth opportunities.

Mr. Huber stated none of these initiatives can proceed without certain committed resources. He reviewed the necessary funding for each initiative, for a total of approximately \$450,000. We will attempt to include this in the 2007 Budget process. Mr. Martin suggested, at a minimum, we should include costs to evaluate the top three initiatives. Mr. Conner stated agreement with those costs, to the extent there is some assurance of success of the initiatives. Mr. Huber advised we should discuss this at a future board meeting and will consider what can be included in the upcoming 2007 budget.

#### Discussion Held Regarding Sources for Investment Capital for New Business Opportunities

Mr. Miller provided an overview of the topic, stating for regional expansion opportunities, the customers would bear the risk if the new expansion is within our retail service area or adjacent, but the owner would bear the risk if outside the area and not adjacent. For vertical integration business opportunities, he suggested that the owner bear those risks since the owner is not required to pursue those opportunities in order to fulfill their service area responsibilities. Mr. Miller proposed the distribution of profits and losses should follow this same pattern.

Mr. Conner stated we must have our owner's perspective on this issue. Mr. Rick Johnstone believes if we have excess capacity and can earn from selling it in any location, regardless of whether it is within or outside our current retail service area, the owner is prepared to share the risks and losses and feels it should also share any gains. Mr. Conner agreed, but noted this does not address the vertical integration

Board of Water Works August 15, 2006 Regular Meeting Minutes Page 5 of 9 opportunities. Mr. Martin believes those opportunities must be addressed on a case-by-case basis because it depends on how closely related the opportunity is to our core business.

Mr. Huber advised we would take this subject up in more depth at a future board meeting. Mr. Miller will update the discussion paper on this topic to reflect the Board's direction on this matter.

#### 2006 Mid-Year Report on Strategic Plan Measurement Results Provided

Mr. Ed Chestnut reported that most measures in the 2004-2008 Strategic Plan are on target, including the Customer Satisfaction Index measures, all water quality measures, the O&M cost per customer, the employee safety measure, and the diversity measure. Six goals are not on target. Water rate changes are exceeding the goal to keep them at equal to or less than the CPI plus one percent. The Return on Equity (ROE) target of 9.48% for 2006 is currently on 8.24%, which is more than 1% less than the 5-year moving average ROE for the benchmarked group of investor-owned utilities. Currently, water sales are at 17.6 BG for the midyear, which is not on target for a year-end result of 38.8 BG. The revenue, likewise, is at \$52.2 Million, which is not on target for a year-end result of \$113.8 Million. Under the employee quality of life goals, we are exceeding the target frequency rate of 1.54 for motor vehicle accidents. The Organization Effective Index goal was not met by .15 points.

#### Budget Increased for Project 03638: Crescent Hill Filter Plan Slate Roof Replacement

Mr. James Brammell advised the original scope of work for the slate roof replacement of he CHFP North-South Filter and Chemical Buildings included slate replacement, painting interior truss work, masonry repair to the North-South Filter Building, and other miscellaneous architectural improvements. Construction is complete on the Chemical Building, and the North-South Filter Building is approximately 30 percent complete, to be completed by November 2007. Recent work on these two buildings has brought to light several unforeseen conditions, which require modifications to the construction contract. Several of the wood structural elements of the buildings are rotted and require replacement or repair. Rotted wood purlins and hip and ridge boards were discovered when the slate and roof metals were removed. Gutter brackets were determined to be unsalvageable and must be replaced.

By earlier Change Action, masonry rehabilitation of the north and west faces of the Chemical Building was added to the scope of the project. This rehabilitation work was added to take economic advantage of the scaffolding being already in place and to preclude the possible damage that would occur by placing scaffolding on the new slate in the future. Since the new slate weighs more than the existing slate, a structural analysis was performed to verify the roof was structurally adequate to support the new slate. Although the analysis verified that the increased weight would not compromise the structural integrity of the roof structure, it also revealed that the hip trusses at the four corners of the North-South Filter and Chemical Buildings were undersized for even the original, lighter slate. The cumulative value of changes exceeds \$250,000.

Dr. Wise stated he raised concerns at the time of award that the contract could not be completed for the bid price, and he believes these cumulative change actions indicate at such. He questioned whether these change actions are for items that are within the original specifications for the project. Mr. Brammell stated the project manager and the Capital Projects Authorization Committee have reviewed the requested changes and believes they were not contemplated in the original specifications. Mr. Heitzman advised we will review the specifications again in light of Dr. Wise's concerns and bring this request back to the Board in September.

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#### Budget Increased for Project 10613: Crescent Hill Filter Plant HVAC Improvements

Mr. Brammell advised the CHFP HVAC project was initially bid in October 2005; however, construction costs reflected in the bid results were greater than the budgeted amount of \$400,000. The scope was subsequently reduced to include the lab areas only in an effort to bring costs within budget. Two change actions were approved prior to re-bid that increased the budget by \$180,000. Change Action 2 requested an additional \$150,000 for an increase in scope to provide improvements to the laboratory exhaust systems necessary to meet code requirements. Change Action 4 requested \$30,000 for additional consultant costs and to reflect market conditions based on the bids received in October 2005. Bids were received in April 2006 for the re-bid package. In order to award to the lowest responsive bidder, G.B.M.C., Change Action 5 was issued in the amount of \$63,842. This change includes costs for temporary relocation of laboratory personnel to B.E. Payne.

Since construction began, several items requiring additional funding were discovered. The existing roof structure below the removed chiller requires additional bracing and the existing equipment support curbs require replacement due to their deteriorated condition. This was not apparent until the chiller was removed and the conditions were made visible. The existing piping system below the concrete within the mechanical room requires the use of acid waste grade piping. This was not evident until the concrete was removed and the piping was exposed. Change Action 6 is submitted and requests \$10,691 to correct these items. The cumulative value of the previous changes plus the latest change exceeds \$250,000. Mr. Martin moved to authorize the Chief Engineer to increase the project by \$10,691 and to establish a new project budget at \$654,533. Ms. Margaret Harris seconded, and the motion carried, with Dr. Wise voting in opposition.

#### Authorization Granted For Cooperation Agreement with Bullitt County Fiscal Court to Implement Kentucky Infrastructure Authority Grants

Mr. Brammell stated LWC is committed, pursuant to the Kentucky Turnpike Water District Merger Agreement, to pursue grant opportunities to assist in the funding of the Bullitt County Water Improvement Program. In May 2001, LWC presented 207 grant requests for water main extension projects in Bullitt County to the Kentucky Infrastructure Authority (KIA) for consideration. Bullitt County Fiscal Court received conditional commitment letters from KIA for grant assistance for 22 projects totaling \$888,000. Dr. Wise moved to adopt the following Resolution to administer and implement the water main extension grant projects through a Cooperation Agreement outlining the relationship between the LWC and the Bullitt County Fiscal Court.

WHEREAS, the Kentucky General Assembly passed the 2004-2006 Budget of the Commonwealth where water main extension projects were named for grant funding through the Kentucky Infrastructure Authority from the Infrastructure for Economic Development Fund for Non-Coal Producing Counties, and;

WHEREAS, Bullitt County Fiscal Court has received conditional grant commitment letters from the Kentucky Infrastructure Authority for water main extensions on the routes listed in Table 1 as shown in the Board materials for the August 15, 2006 meeting, and;

WHEREAS, the Louisville Water Company has been approved to implement and carry out the Kentucky Infrastructure Authority grant projects by Bullitt County Fiscal Court; and,

**NOW THEREFORE, BE IT RESOLVED** by the Bullitt County Fiscal Court and Louisville Water Company that:

1. All policy decisions relating to types of activities to be included in these projects will be approved by the Bullitt County Fiscal Court, Kentucky;

Board of Water Works August 15, 2006 Regular Meeting Minutes Page 7 of 9 2. The Louisville Water Company, is hereby designated as the unit representing the Bullitt County Fiscal Court in implementing and carrying out these Kentucky Infrastructure Authority grant projects; and,

3. That the Louisville Water Company will review and give preliminary approval to all reports, expenditures and other correspondence or data necessary to implement the projects; and reports on said implementation will be made to the Bullitt County Fiscal Court periodically; and,

4. The County Judge Executive, or his designated agent, is appointed as the official representative of the Bullitt County Fiscal Court to coordinate the Louisville Water Company activities with these specific grants from the Kentucky Infrastructure Authority. Members of the Bullitt County Fiscal Court shall be kept fully informed of all activities relating to the Kentucky Infrastructure Authority Grant Program.

Ms. Marita Willis seconded, and the motion carried.

#### Property on Billtown Road Declared Excess and Authorization for Granted for Sale by Bid

Mr. Brammell reported LWC acquired ownership of 5.11 acres of land located on Billtown Road (Highway 1819) in southeastern Jefferson County in 1999. LWC subsequently constructed a one million gallon elevated storage tank on the site. The tank and accompanying detention basin utilize 1.46 acres of the property. The remaining 3.65 acres, which contains a house, is of no benefit to the Louisville Water Company and, pursuant to Bond Covenants, our Consulting Engineer recommends LWC should dispose of it. Ms. Willis moved to adopt the following resolution declaring the 3.65 acres of the Billtown Road Tank property as excess and for staff to proceed to sell it in accordance with the bond covenants on disposal of real property:

WHEREAS, the Series 1992 Bond Resolution and Covenants, Section 601 requires the Board of Water Works to formally consider the need for the real property owned by it prior to disposing of the real property; and

WHEREAS, in making its determination, the Board of Water Works has sought and received an opinion by Louisville Water Company's Consulting Engineer, Black & Veatch Engineers, that a 3.65 acre portion of the property known as the "Billtown Road Elevated Water Tank", more particularly described as Tract 2 on the Minor Plat attached, hereinafter referred to as "Property" is no longer needed for the distribution and maintenance of the public waterworks system;

**NOW THEREFORE, BE IT RESOLVED** that the Board of Water Works hereby determines that the Property is no longer necessary and serves no useful purpose in connection with the maintenance and operation of the waterworks system, and further that it is feasible and beneficial and in the LWC's best interests to dispose of the said Property by advertising it for public bid.

Mr. Martin seconded, and the motion carried.

## <u>Property on Highway 22 in Oldham County Declared Excess and Authorization Granted for Sale by Bid</u>

Mr. Brammell reported LWC acquired ownership of a 2,084 square foot (0.05 acres) tract of land located on Highway 22 in Crestwood, Kentucky, as part of an acquisition from the Oldham County Water District, No.1 in 19 ... The property was used for a fill station to serve the Crestwood Area. The fill station is no longer in service and the Oldham County Advisory Board has determined there will be no further need for one. The property therefore is no longer needed for any Louisville Water Company purpose and, pursuant to Bond Covenants, our Consulting Engineer recommends LWC should dispose of it. Mr. Martin moved to adopt the following resolution, which declares the Crestwood Fill Station

Board of Water Works August 15, 2006 Regular Meeting Minutes Page 8 of 9 Property excess, and for staff to proceed to sell it in accordance with the bond covenants on disposal of real property:

WHEREAS, the Series 1992 Bond Resolution and Covenants, Section 601 requires the Board of Water Works to formally consider the need for the real property owned by it prior to disposing of the real property; and

WHEREAS, in making its determination, the Board of Water Works has sought and received an opinion by Louisville Water Company's Consulting Engineer, Black & Veatch Engineers, that the property known as the "Crestwood Fill Station", as more fully described in Exhibit A, attached hereto and incorporated herein by reference, hereinafter referred to as "Property" is no longer needed for the distribution and maintenance of the public waterworks system;

**NOW THEREFORE, BE IT RESOLVED** that the Board of Water Works hereby determines that the Property is no longer necessary and serves no useful purpose in connection with the maintenance and operation of the waterworks system, and further that it is feasible and beneficial and in the LWC's best interests to dispose of the said Property by advertising it for public bid.

Ms. Willis seconded, and the motion carried.

#### **Executive Session Conducted**

The Board went into Executive Session without management present at 3:31 p.m.

There being no further business, the meeting was adjourned at 3:58 p.m.

Respectfully submitted,

Barbara K. Dickens Vice President, General Counsel and Corporate Secretary

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Data were recorded monthly from January, 1975 through December, 2004. The data included usage: residential, commercial, industrial, wholesale, other, total, and number of customers: residential, commercial, industrial, wholesale, other, total. The data were first forecast both monthly and yearly with a 20-year lead (240 months) without using any dynamic regressors. The monthly forecast indicates a very seasonal and slightly increasing pattern for residential, commercial, wholesale, other, and total. There was a seasonal, decreasing pattern for industrial. The yearly forecast, while not seasonal, indicated a similar increasing (decreasing for industrial) trend.

Dynamic regressors were added sequentially to ensure that the resulting forecasts were robust and to ensure against over-fitting. The following regressors were used in the model from the Bureau of Economic Analysis (http://www.bea.gov/bea/regional/spi/#download):

- 1. Population census data for Jefferson County
- 2. Population census data for Bullitt County
- 3. Population census data for Oldham County
- 4. Population census data for Kentucky
- 5. Number of households for same
- 6. Personal income for Kentucky residents
- 7. Employment for Kentucky

· ·

8. Number of businesses for Kentucky

In addition, for usage (but not for the number of customers), the PDSI index (Palmer Drought Severity Index, http://wwwagwx.ca.uky.edu/drought\_cd2.txt) was included. Since usage is dependent upon the number of customers, the forecast for usage using only PDSI index and number of customers was compared to the forecast using PDSI and the economic indicators. The results were virtually identical (excepting for wholesale usage where the definition of customer changes from individual unit to unit serving many individuals). For each forecasted value, the following information is provided:

- 1. Monthly forecast of usage without the use of dynamic regressors.
- 2. Yearly forecast of outcomes without the use of dynamic regressors.
- 3. Yearly forecast of outcomes with the addition of dynamic regressors.
- 4. Forecast of the ratio of usage to customers to estimate individual usage by group
- 5. Yearly forecast showing upper and lower confidence limits.
- 6. Numeric table of forecasted values including upper and lower 95% confidence limits.

For comparison purposes, the forecasts for the dynamic regressors are also provided.

For the most part, the addition of economic regressors contributed little to the forecast for the next 20 years, indicating that most of the forecast comes directly from the trends in usage and in the number of customers for the previous 30 years. Therefore, the trends in both usage and number of customers are fairly robust, which suggests confidence in the forecasted results.

| ouisville Water Company Consumption by Montl<br>Thousands of Gallons |
|--|
|--|

|   | January                                    | February                                    | March   | April                                    | Мау  | June                                       | July  | August                                     | September                                  | October                                    | November                                   | December                                     | Total   |
|---|--|---|---|--|--|--|---|--|--|--|--|--|---|
| 2001<br>Residential<br>Commercial<br>Industrial<br>Fire Service | 1,286,945<br>1,256,715<br>437,830<br>5,018 | 1,283,758<br>1,269,036<br>426,499<br>12,897 | 1,148,436<br>1,128,570<br>411,168<br>9,401    | 925,642<br>966,512<br>402,771<br>(4,490) | 1,345,809<br>1,109,867<br>371,527<br>2,547 | 1,423,059<br>1,252,998<br>540,949<br>3,170 | 1,549,492<br>1,385,111<br>386,908<br>3,602  | 1,552,988<br>1,517,709<br>284,250<br>4,101 | 1,549,939<br>1,611,791<br>455,314<br>3,546 | 1.381.514<br>1.222,452<br>364,649<br>2.829 | 1,267,007<br>1,369,231<br>413,272<br>3.890 | 1,181,574<br>1,090,857<br>355,020<br>5,603   | 15,896,163<br>15,180,849<br>4,850,157<br>52,114 |
| Fire Hydrant<br>Municipal<br>Utilities                          | -<br>61,663<br>97,242                      | 80,422<br>167,664                           | -<br>111,348<br>52,255                        | -<br>301,000<br>129,208                  | -<br>111,762<br>107,250                    | -<br>107,287<br>168,044                    | -<br>188,524<br>140,063                     | -<br>193,116<br>146,568                    | -<br>195.087<br>156,544                    | -<br>128,042<br>132,764                    | -<br>211,313<br>141,354                    | -<br>121,410<br>149,009                      | -<br>1,810,974<br>1,587,965                     |
| Subtotal  | 3,145,413                                  | 3,240,276                                   | 2,861,178                                     | 2,720,643                                | 3,048,762                                  | 3,495,507                                  | 3,653,700                                   | 3,698,732                                  | 3,972,221                                  | 3,232,250                                  | 3,406,067                                  | 2,903,473                                    | 39,378,222                                      |
| 1   | January                                    | February                                    | March   | April                                    | May  | June                                       | July  | August                                     | September                                  | October                                    | November                                   | December                                     | Total   |
| 2002<br>Residential<br>Commercial<br>Industrial<br>Fire Service | 1,063.717<br>1,142.796<br>389,291<br>1,603 | 1,285,581<br>1,023,233<br>403,599<br>24,814 | 1,261,377<br>1,147,706<br>375,236<br>(16,310) | 997,713<br>959,585<br>394,134<br>3.551   | 1,285,966<br>1,262,271<br>459,118<br>5,586 | 1,153.201<br>1,156,421<br>414,701<br>3,649 | 1,593,667<br>1,483,461<br>424,908<br>2,244  | 1,883,415<br>1,518,942<br>435,924<br>2,985 | 1,870,785<br>1,700,783<br>439,722<br>3,489 | 1,863,020<br>1,415,427<br>400,048<br>185   | 1,354,277<br>1,369,890<br>439,656<br>3,338 | 1,124,496<br>1,056,918<br>362,095<br>2,637   | 16,737,214<br>15,237,434<br>4,938,432<br>37,771 |
| Fire Hydrant<br>Municipal<br>Utilities                          | -<br>135,078<br>119,306                    | -<br>199,414<br>136,819                     | -<br>169,150<br>96,868                        | -<br>(6,742)<br>119,387                  | -<br>146,776<br>110,779                    | -<br>114,577<br>150,421                    | -<br>193,131<br>155,225                     | -<br>121,046<br>186,984                    | -<br>248,962<br>143,468                    | 96,093<br>143,556                          | 171,778<br>100,781                         | 90,419<br>109,685                            | 1,679,682<br>1.573,279                          |
| Subtotal  | 2,851,791                                  | 3,073,460                                   | 3,034,027                                     | 2,467,628                                | 3,270,496                                  | 2,992,970                                  | 3,852,636                                   | 4,149,296                                  | 4,407,209                                  | 3,918,329                                  | 3,439,720                                  | 2,746,250                                    | 40,203,812                                      |
| I   | January                                    | February                                    | March   | April                                    | May  | June                                       | July  | August                                     | September                                  | October                                    | November                                   | December                                     | Total   |
| 2003<br>Residential<br>Commercial<br>Industrial<br>Fire Service | 1,406,019<br>1,302,235<br>396,016<br>5,824 | 1,148,515<br>1,010,973<br>417,326<br>3,539  | 1,195,673<br>1,159,670<br>413,398<br>9,463    | 1,089,517<br>973,891<br>378,730<br>2,277 | 1,240,838<br>1,218,917<br>404,868<br>3,426 | 1,283,153<br>1,124,261<br>391,850<br>2,956 | 1,417,801<br>1,466,430<br>426,119<br>3,530  | 1,589,116<br>1,332,541<br>398,675<br>2,541 | 1,411,232<br>1.532,481<br>431,782<br>2,763 | 1,450,200<br>1,342,554<br>426,585<br>2,776 | 1,253,781<br>1,311,139<br>375,942<br>3,113 | 1,169,749<br>1,009,550<br>414,160<br>3,240   | 15,655,594<br>14,784,642<br>4,875,451<br>45,448 |
| Fire Hydrant<br>Municipal<br>Utilities                          | -<br>72,843<br>129,775                     | -<br>141,728<br>104,584                     | -<br>36,380<br>103,389                        | -<br>45,290<br>105,101                   | -<br>99,992<br>114,813                     | -<br>61,048<br>112,725                     | -<br>155,090<br>143,128                     | -<br>89,604<br>135,418                     | -<br>162,942<br>121,937                    | 135,868<br>124,660                         | 137,454<br>95,059                          | 147,318<br>106,816                           | 1,285,557<br>1,397,405                          |
| Subtotal  | 3.312,712                                  | 2,826,665                                   | 2,917,973                                     | 2,594,806                                | 3,082,854                                  | 2,975,993                                  | 3,612,098                                   | 3,547,895                                  | 3,663,137                                  | 3,482,643                                  | 3,176,488                                  | 2,850,833                                    | 38,044,097                                      |
| LWC Water   | 67,258                                     | 51,726                                      | 74,262  | 27,507                                   | 57,105                                     | 116,486                                    | 21,556                                      | 61,166                                     | 54,369                                     | 67,916                                     | 46,834                                     | 68,225                                       | 714,410   |
| Grand Total   | 3,379,970                                  | 2,878,391                                   | 2,992,235                                     | 2,622,313                                | 3,139,959                                  | 3,092,479                                  | 3,633,654                                   | 3,609,061                                  | 3,717,506                                  | 3,550,559                                  | 3,223,322                                  | 2,919,058                                    | 38,758,507                                      |
|   | January                                    | February                                    | March   | April                                    | May  | June                                       | July  | August                                     | September                                  | October                                    | November                                   | December                                     | Total   |
| 2004<br>Residential<br>Commercial<br>Industrial<br>Fire Service | 1,307,085<br>1,258,111<br>344,033<br>4,402 | 1,212,920<br>1,011,851<br>432,016<br>5,470  | 1,180,929<br>1,237,381<br>279,286<br>5,657    | 1,061,698<br>949,679<br>503,762<br>3,922 | 1,228,683<br>1,225,078<br>414,352<br>4,561 | 1,373,576<br>1,137,696<br>408,088<br>3,199 | 1,394,924<br>1,441,402<br>414,830<br>14,457 | 1,522,778<br>1,252,400<br>377,136<br>3,907 | 1,332,390<br>1,472,582<br>469,376<br>3,743 | 1,703,389<br>1,324,526<br>382,618<br>3,606 | 1,373,066<br>1,318,264<br>355,470<br>4,315 | 1,344,482<br>1,113,845<br>377,697<br>(6,097) | 16,035,920<br>14,742,815<br>4,758,664<br>51,142 |
| Fire Hydrant<br>Municipal<br>Utilities                          | -<br>142,945<br>127,238                    | -<br>45,460<br>116,196                      | -<br>82,197<br>104,520                        | -<br>48,395<br>127,901                   | -<br>79,622<br>119,120                     | -<br>73,739<br>122,463                     | -<br>168,012<br>144,483                     | -<br>80,437<br>125,452                     | -<br>188,848<br>146,655                    | -<br>64,865<br>143,384                     | -<br>122,167<br>105,820                    | -<br>52,668<br>122,294                       | -<br>1,149,355<br>1,505,526                     |
| Subtotal  | 3,183,814                                  | 2,823,913                                   | 2,889,970                                     | 2,695,357                                | 3,071,416                                  | 3,118,761                                  | 3,578,108                                   | 3,362,110                                  | 3,613,594                                  | 3,622,388                                  | 3,279,102                                  | 3,004,889                                    | 38,243,422                                      |
| LWC Water   | 63,495                                     | 66,020                                      | 54,413  | 72,904                                   | 34,918                                     | 92,897                                     | 61,369                                      | 64,679                                     | 73,626                                     | 98,688                                     | 55,698                                     | 70,927                                       | 815,634   |
| Grand Total   | 3,247,309                                  | 2,889,933                                   | 2,944,383                                     | 2,768,261                                | 3,106,334                                  | 3,211,658                                  | 3,645,477                                   | 3,426,789                                  | 3,687,220                                  | 3,721,076                                  | 3,334,800                                  | 3,075,816                                    | 39,059,056                                      |

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# Louisville Water Company Consumption by Month 2001-2006 Thousands of Gallons

| reutary         manual         manual <thmanua< th="">         manua         manua<th></th><th></th><th>Echrison</th><th>March</th><th>Anril</th><th>Mav</th><th>June</th><th>July</th><th>August</th><th>September</th><th>October</th><th>November</th><th>December</th><th>Total</th></thmanua<>  |                            |           | Echrison  | March     | Anril     | Mav         | June      | July        | August    | September  | October    | November  | December  | Total       |
|---|----------------------------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|-----------|------------|------------|-----------|-----------|-------------|
| Image: section interval i | 1                          | January   | reviualy  |           |           |             |           |             |           |            |            |           |           |             |
| $ \begin{array}{ ccccccccccccccccccccccccccccccccccc$   | 2005                       |           | 010 000 1 | 1 101 500 | 1 170 606 | C11 710 1   | 1 386 173 | 1 457 719   | 2.136.558 | 1.525.365  | 1.804,923  | 1,298,345 | 1,303,205 | 17,089,874  |
| 1,360,07         964,601         1,065,173         964,601         1,065,173         964,601         1,065,173         963,314         963,317         363,317         364,32         4,327         363,317         363,317         364,317         363,317         364,317         363,317         364,317         363,317         37,469         34,569         4,161         32,554         4,277         4,225,568         5,249         133,759         136,139         136,139         33,300           123,070         2,118,540         117,267         2,553         3,165,168         316,5168         316,5168         316,5169         316,5179         316,5179         316,5179         316,5179         316,5123         310,5169         316,5179  | Residential                | 1,387,198 | 1,239,850 | 1,124,320 | 1/1/0     | 21 1, 142,1 |           | 4 E-40 0E-4 | 1 457 013 | 1 631 482  | 1 423 516  | 1.407.795 | 1.114.450 | 15,380,714  |
| 361.024         366.65         351.81         37.53         36.55         40.57         42.55         36.52         42.101         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56         37.56  | Commercial                 | 1.336.078 | 984,801   | 1,085,777 | 989,065   | 1,223,308   | 1,140,072 | 100'610'1   | 010,004,1 | HOL: 100's |            | 710 030   | 361 460   | 4 587 316   |
| 4,466 $4,466$ $4,659$ $4,181$ $3,544$ $2,773$ $2,566$ $3,461$ $2,236$ $3,726$ $3,716$ $5,411$ $2,236$ $3,173$ $3,13200$ $133,579$ $133,579$ $133,579$ $133,579$ $133,579$ $133,610$ $51,3320$ $3400,2900$ $51,326$ $3,132,000$ $122,2003$ $90,202$ $53,405$ $53,161$ $80,3277$ $4,240,222$ $3,960,117$ $33,300,290$ $57,123$ $3,321,200$ $53,415$ $50,2021$ $51,31,295$ $3,151,295$ $3,151,295$ $3,151,295$ $3,151,295$ $3,131,295$ $3,900,7950$ $57,123$ $3,320,0024$ $3,007,950$ $57,123$ $3,320,0024$ $3,007,950$ $57,123$ $3,400,025$ $59,0024$ $3,007,950$ $57,123$ $57,002$ $3,007,950$ $57,123$ $54,006$ $57,123$ $52,006$ $57,123$ $59,0024$ $5007,950$ $57,123$ $52,006$ $57,123$ $52,006$ $51,123$ $50,0106$ $52,310$ $52,006$ $51,123$ $50,0106$   | l-interiol                 | 101 132   | 386 665   | 351 813   | 397.539   | 382,653     | 404,277   | 422,528     | 380,252   | 101,224    | 010,100    |           | 001'I 00  |             |
| 138:196         47,146         94,221         53,151         89,825         65,218         165,248         107,506         73,350         151,322         43,022           138:196         47,146         94,221         53,151         181,336         147,267         160,045         181,336         142,806         153,579         156,119         133,290           3,379         57,143         2,750,390         3,064,069         3,165,156         3,639,277         4,240,292         3,965,749         3,766,111         3,300,094         2,960,887         2,910,886  | lingusurai<br>Eiro Sonrico | 4 466     | 4 469     | 4.559     | 4,181     | 3,594       | 2,773     | 2,583       | 2,256     | 3,491      | 2,235      | 3,126     | 5,411     | 43,144      |
|   |                            | 00t't     |           |           |           |             |           |             | ı         |            | ł          | •         | •         |             |
|   | Fire nyuram                |           |           |           | E2 1E1    | 80 835      | 65 218    | 195.254     | 107.508   | 239,800    | 64,240     | 151,392   | 43,002    | 1,288,903   |
| 132.903         96.262         118:549         12,1446         11,540         11,540         11,540         11,540         276,114         3.66,174         3.66,174         3.66,034         2.960,827         4.240,222         3.936,740         3.766,111         3.66,064         2.960,827         3.400,83         3.766,111         3.66,064         3.66,178         3.66,173         3.66,173         3.66,173         3.66,173         3.66,173         3.66,173         3.66,173         3.66,173         3.66,173         3.66,084         3.66,183         3.66,174         3.66,044         3.66,084         5.770         69,330         57,123           3,433,077         2,844,566         5,843         6,7,226         5,7,48         66,251         61,066         5,370         69,390         57,123           3,433,077         2,844,566         1,077,669         1,064,61         1,756,71         1,256,56         1,517,433         1,002,463         1,227,60           1,344,155         3,616,63         3,361,63         1,256,61         1,366,66         1,361,64         1,277,60         1,256,61         1,333,65         1,277,60         1,226,618         1,377,433         1,200,662         2,396,857         2,966,857         2,966,857         2,966,857         2,966,857         2,966   | Municipal                  | 138,190   | 41,140    | 177'46    | 101,000   | 747 767     | 160 045   | 181 336     | 149 805   | 173,450    | 133.579    | 136,119   | 133,290   | 1,662,453   |
| 3.379.865 $2.761.193$ $2.760.390$ $3.06.406$ $3.65.765$ $3.89.277$ $4.240.292$ $3.966.111$ $3.360.094$ $2.960.827$ $53.212$ $53.405$ $50.842$ $63.843$ $67.226$ $57.148$ $69.251$ $61.935$ $69.068$ $55.370$ $69.30$ $57.123$ $3.433077$ $2.814.568$ $51.223$ $3.131.286$ $57.2306$ $3.906.528$ $4.302.227$ $4.064.817$ $3.821.461$ $3.400.024$ $3.007.960$ $Jaruary$ February         March         April         May         Jun         August $56.906$ $5.5.70$ $69.930$ $57.123$ $Jaruary$ February         March         April         May         Jun         August $5.746.81$ $3.300.627$ $3.007.960$ $57.123$ $Jaruary$ $1.077.664$ $914.677$ $1.182.066$ $1.755.710$ $1.777.48$ $966.685$ $1.227.60$ $Jaruary$ $1.377.960$ $3.375.665$ $1.333.776$ $3.306.67$ $1.270.926$ $590.685$ $1.277.60$   | Utilities                  | 132,903   | 98,262    | 118,549   | 121,840   | 107,111     | 0+0,001   | 000101      |           |            | •          |           |           |             |
| 3.379.865         2.761.483         2.703.04         3.007.990         55.370         69.930         57.123           53,212         53.405         50.842         63.843         67.226         57.148         69.251         61.935         69.068         55.370         69.930         57.123           3,433,077         2.614.568         2.830.281         2.814.233         3.131.295         3.222.306         3.006.528         4.302.227         4.064.817         3.430.024         3.007.990         57.128           January         February         March         April         May         June         July         August         September         October         November         December           January         1,341.152         1,252.870         1,046.527         1,182.086         1,366.566         1,576.748         985.685         1,227.760           1,341.152         1,222.817         1,046.527         1,182.086         1,567.716         1,295.666         1,517.248         985.685         1,227.760           1,344.333         1,024.833         1,046.527         1,146.6888         1,383.222         364.765         1,237.480         326.665         2,377.60           1,344.333         1,343.333         1,556.710         1,285.328 <th></th> <td></td> <td></td> <td></td> <td>000 000</td> <td></td> <td>0 465 450</td> <td>2 020 277</td> <td>000 UVC V</td> <td>3 995 749</td> <td>3 766 111</td> <td>3.360.094</td> <td>2,950,827</td> <td>40,052,464</td>  |                            |           |           |           | 000 000   |             | 0 465 450 | 2 020 277   | 000 UVC V | 3 995 749  | 3 766 111  | 3.360.094 | 2,950,827 | 40,052,464  |
| 53,21253,40550,84263,64367,22657,14869,26161,93565,37069,93057,1233,433,0772,814,5392,814,2333,131,2953,222,3063,908,5284,302,2274,064,8173,821,4813,430,0243,007,550JanuaryJanuaryFebruaryMarchAprilMayJuneJulyAugust5,57101,125,248966,6651,207,6601,341,1521,252,8701,077,6691,046,5271,182,0681,308,6161,256,7101,255,7101,122,8661,517,4333,007,5601,341,1521,252,8701,074,6831,167,4311,242,0461,333,7221,557,101,177,4331,206,6671,007,6601,341,1521,245,12536,1253,6402,3042,3463,337,223,33,6151,127,4333,306,652,27661,341,1521,242,633,6163,337,231,355,7101,126,6161,177,4331,206,6521,207,6001,341,1521,56,63971,7012,214197,5531,15,2973,366,6551,227,6672,9681,37,4603,71602,836,733,6402,3042,3463,3222,9445,2212,4522,7561,286,6391,16,4771,15,407115,407159,6861,17,77,4331,237,6961,227,6961,33,6962,37662,37662,37662,37661,286,6091,15,407159,6861,17,0711,37,5481,52962,4522,4522,7662,   | Subtotal                   | 3,379,865 | 2,761,193 | 2,779,439 | 2,750,390 | 3,054,059   | 3,100,100 | 0,009,211   | 4,640,636 | 01100010   |            |           |           |             |
| 53,212         53,405         50,842         63,843         67,226         57,148         69,221         01,930         04,000<   | 1                          |           |           |           |           |             | •         | 1000        |           | 0000       | EE 270     | 60 030    | 57 123    | 728.353     |
| 3,433,077         2,814,596         2,830,281         2,814,233         3,131,295         3,222,306         3,906,528         4,302,227         4,064,817         3,821,481         3,430,024         3,007,950           January         February         March         April         May         June         July         August         September         0.006 fr         November         December           1,311,152         1,222,870         1,077,669         1,046,527         1,182,068         1,324,346         1,503,316         1,512,248         966,666         1,222,780           1,334,152         1,222,870         1,077,669         1,046,527         1,182,068         1,333,283         350,570         352,716         1,512,248         966,665         1,227,780           1,334,465         1,174,454         315,704         353,650         336,570         352,715         1,512,438         16,327         1,333,665         229,635         2,2756           1,334,475         155,7780         1,375,466         1,375,436         336,550         336,570         336,567         2,396,555         2,27567         2,395         2,39637         2,37567         2,37567         2,316         1,231,407         1,375,466         1,517,433         1,231,305         1,231,407<  | LWC Water                  | 53,212    | 53,405    | 50,842    | 63,843    | 67,226      | 57,148    | 162,99      | 01,930    | 09,000     | 010'00     | 000100    | 21.1      |             |
| 3433.077         2,814,598         2,830.281         2,814,233         3,131,295         3,122,300         3,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,300,320         4,321,48         1,865,110         1,295,866         1,512,248         965,665         1,227,780           1,341,152         1,222,817         1,077,669         1,046,527         1,182,098         1,383,328         1,500,575         1,300,667         1,300,667           1,341,152         1,222,817         0,077,669         1,046,527         1,182,098         1,160,431         1,466,688         1,383,728         1,500,562         1,030,667           1,343,333         377,980         347,728         365,125         361,603         3,332,23         333,616         2,394,657         2,394,676         2,345         2,393,615         2,353,616         2,393,615         2,356         2,393,615         2,356         2,393,615         2,356         3,330,667         2,345         2,356         2,356         2,356         2,356         2,356         2,356         2,356         2,356         2,356         2,356         2,356         2,356         <  |                            |           |           |           |           |             |           | 000 000 0   | 700 000 1 | A DEA 817  | 3 821 481  | 3 430.024 | 3.007.950 | 40.780.817  |
| January         February         March         April         May         June         July         August         September         October         November         December           January         February         March         April         May         June         July         August         September         October         November         December           1,341,152         1,252,870         1,077,669         1,046,527         1,182,086         1,398,616         1,227,980         1,177,433         1209,562         1,030,667           1,334,333         1,004,885         1,174,454         91,671         3,35,106         1,512,248         985,685         1,207,780           3,47,728         366,125         36,406         7,335,10         1,295,686         1,177,433         1,206,667         2,758           3,77,980         34,703         366,125         36,602         71,701         2,346         3,35,715         382,715         2,452         2,758           4,865         4,4605         126,514         36,602         1,17,743         115,297         14,383         104,325         2,455         2,452         2,756           138,417         115,779         126,514         156,560         3,489,960  | Grand Total                | 3,433,077 | 2,814,598 | 2,830,281 | 2,814,233 | 3,131,295   | 3,222,300 | 3,300,020   | 4,302,221 | 10'100'1   | 10111000   |           |           |             |
| January         February         March         April         May         Juny         Auget         September         October         November         December           lential         1,341,152         1,252,870         1,077,669         1,046,527         1,180,031         1,755,710         1,295,866         1,512,248         996,685         1,227,780           nercial         1,334,333         1,004,885         1,174,454         911,671         1,274,346         1,160,431         1,666,688         1,556,710         1,512,248         996,685         1,227,780           strial         377,980         347,728         361,650         1,160,431         1,666,688         1,363,728         1,530,676         1,512,248         996,685         1,227,80           strial         377,980         347,728         361,650         71,600         2,394         5,221         2,452         2,756         2,3665           strian         122,864         155,670         121,747         115,407         159,858         171,707         127,438         143,355         2,944         5,221         2,452         2,756         2,756           strian         1138,417         115,479         115,407         159,638         126,566         122,143   | .1                         |           |           |           |           |             |           |             |           |            |            |           |           |             |
| January         February         Marcn         April         Marcn  |                            |           | 1         |           | 11 V      | May         | oni       | vhul.       | August    | September  | October    | November  | December  | Total       |
| Install         1,341,152         1,252,870         1,077,669         1,046,527         1,182,098         1,386,156         1,512,248         985,685         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,227,780         1,177,433         1,209,662         1,00,667         1,177,433         1,209,662         1,00,667         1,177,433         1,209,662         1,277,433         1,209,662         1,277,433         1,209,662         1,277,433         1,209,667         2,98,837         2,99,837         2,91,92         2,1750         2,16,174         1,16,477         1,37,548         1,15,297         1,33,356         1,12,143         1,21,471         2,15,413         1,27,123         2,123,130   | 1                          | January   | February  | Marcn     | April     | indy        | 2000      | 6.55        |           |            |            |           |           |             |
| 1.341.152 $1.252.870$ $1.001,003$ $1.017,433$ $1.209.562$ $1.003.667$ $1.331.728$ $365.125$ $361.868$ $315.704$ $365.650$ $398.833$ $350.510$ $362.715$ $286.761$ $333.685$ $299.837$ $377.980$ $347.728$ $365.125$ $361.866$ $363.650$ $398.833$ $350.510$ $362.715$ $286.761$ $333.685$ $299.837$ $377.980$ $347.728$ $365.125$ $361.704$ $2.304$ $2.304$ $2.346$ $3.322$ $2.944$ $5.221$ $2.452$ $2.399.837$ $377.980$ $347.728$ $365.639$ $79.781$ $49.100$ $89.662$ $71.701$ $221.431$ $97.533$ $115.297$ $143.833$ $104.325$ $4.3305$ $122.864$ $55.639$ $79.781$ $121.747$ $115.407$ $159.869$ $171.071$ $137.548$ $156.556$ $122.483$ $123.336$ $138,417$ $115.779$ $126.518$ $121.747$ $115.407$ $159.869$ $3.728.351$ $3.464.054$ $3.256.46$ $2.736.192$ $3.319.607$ $2.781.406$ $2.827.590$ $2.493.764$ $2.980.857$ $3.156.560$ $3.728.351$ $3.464.054$ $3.250.665$ $2.756.192$ $2.775.67$ $3.319.607$ $2.781.406$ $6.536$ $6.3,123$ $53.763$ $55.780$ $61.506$ $3.728.356$ $2.756.192$ $2.0056$ $3.319.607$ $2.936.386$ $3.728.361$ $3.728.351$ $3.464.054$ $3.250.665$ $2.756.192$ $2.0056$ $5.6665$ $2.836.386$ $3.728.328$   | 2006                       |           |           | 0000      | 201 010 F |             | 1 208 616 | 1 229 611   | 1 755 710 | 1.295.866  | 1.512.248  | 985,685   | 1,227.780 | 15,305,832  |
| 1,334,3331,004,8851,114,454911,6711,24,4461,100,4511,400,450236,510362,715286,761333,685299,837377,980347,728365,125361,868315,704363,650388,833355,510362,71524522,4522,4522,7584,8554,5054,5052,0412,365388,8333,3222,9445,2112,4522,7584,8554,5054,6052,8613,6402,3042,3042,305,510362,715143,883104,3254,335122,86455,63979,761121,747115,407159,858171,071137,548115,565125,119122,483123,130138,417115,779126,518121,747115,407159,858717,071137,548156,556125,119122,483123,130138,417115,779126,518121,747115,407159,8583,728,3513,464,0543,250,6652,758,1922,775,5673,319,6072,781,4062,827,5902,493,7642,930,8573,156,5603,489,9803,728,3513,464,0543,250,6652,758,1922,775,56763,62254,98065,36663,12355,78062,8673,728,3513,464,0543,250,6652,758,1922,775,56753,92654,98663,12355,78055,78052,28961,51061,8062,895,1922,706652,758,19270,05963,62554,9862,895,1863,03  | Residential                | 1,341,152 | 1,252,870 | 1,077,669 | 170,040,1 | 1, 102,030  |           | 1 10,042,1  | 1 282 728 | 1 530 676  | 1 177 433  | 1.209.562 | 1.030.667 | 14,658,874  |
| 377,980         347,728         365,125         361,868         315,704         363,650         398,833         390,510         362,113         20,701         30,010         20,713         20,713         20,713         20,713         20,713         20,713         20,713         20,713         21,521         21,452         2758           4,855         4,505         4,043         2,861         3,640         2,304         2,346         3,322         2,944         5,221         2,452         2,758           122,864         55,639         79,761         115,407         159,858         171,071         137,548         156,556         125,119         122,483         123,130           138,417         115,779         126,518         121,747         115,407         157,548         156,556         125,131         122,483         104,325         43,395           3,319,601         2,781,406         2,827,590         2,493,764         2,56,165         2,276,192         2,775,677         2,775,677           3,319,601         2,781,406         2,837,690         55,780         62,867         3,764,054         3,250,665         2,776,413         123,471         2,83,695           63,622         5,533         156,560         3,4  | Commercial                 | 1,334,333 | 1,004,885 | 1,174,454 | 911,671   | 1,274,346   | 1,100,431 | 1,400,000   | 071,000,1 |            | 2001,111,1 | 333 685   | 790 837   | 4 164 396   |
| 4,855 $4,505$ $4,043$ $2,851$ $3,640$ $2,304$ $2,346$ $3,322$ $2,944$ $5,221$ $2,492$ $4,792$ $4,792$ $122,864$ $55,639$ $79,781$ $49,100$ $89,662$ $71,701$ $221,431$ $97,533$ $115,297$ $143,883$ $104,325$ $43,395$ $138,417$ $115,779$ $126,518$ $121,147$ $115,407$ $159,858$ $171,071$ $137,548$ $155,556$ $125,119$ $122,483$ $123,130$ $3,319,601$ $2,781,406$ $2,827,590$ $2,493,764$ $2,980,857$ $3,156,560$ $3,489,980$ $3,728,351$ $3,464,054$ $3,250,665$ $2,758,192$ $2,775,677$ $63,622$ $54,980$ $65,536$ $63,123$ $53,763$ $55,780$ $62,867$ $52,289$ $61,510$ $61,806$ $70,069$ $63,623$ $2,893,126$ $2,556,887$ $3,034,620$ $3,212,340$ $3,552,847$ $3,726,564$ $3,312,471$ $2,823,188$ $2,797,636$  | Inductrial                 | 377 980   | 347.728   | 365.125   | 361,868   | 315,704     | 363,650   | 398,833     | 350,510   | 207'1 12   | 101'007    |           | 0 750     | 1001011     |
| 122,864         55,639         79,781         49,100         89,662         71,701         221,431         97,533         115,297         143,883         104,325         43,395           138,417         115,779         126,518         121,147         115,407         159,858         171,071         137,548         156,556         125,119         122,483         123,130           3,319,601         2,781,406         2,827,590         2,493,764         2,980,857         3,156,560         3,489,980         3,728,351         3,464,054         3,250,665         2,758,192         2,775,567           3,319,601         2,781,406         2,827,590         2,493,764         2,980,857         3,156,560         3,489,980         3,728,351         3,464,054         3,250,665         2,775,672         2,775,567           63,622         54,980         65,536         63,123         55,780         62,867         5,2289         61,510         61,806         64,996         70,069           3,383,223         2,836,386         2,833,126         3,034,620         3,212,347         3,700,640         3,525,564         3,312,471         2,823,188         2,797,636   | Fire Service               | 4.855     | 4,505     | 4,043     | 2,851     | 3,640       | 2,304     | 2,346       | 3,322     | 2,944      | 177'9      | 704'7     | 00117     | 1 + 7 + 1 + |
| 122,864         55,639         79,781         49,100         89,662         71,701         221,431         97,533         115,297         143,863         104,329         43,363         123,130           138,417         115,779         126,518         121,747         115,407         159,858         171,071         137,548         156,556         125,119         122,483         123,130           3,319,607         2,781,406         2,827,590         2,493,764         2,980,857         3,156,560         3,489,980         3,728,351         3,464,054         3,250,665         2,758,192         2,775,567           63,622         54,980         63,123         53,763         55,780         62,867         3,728,351         3,464,054         3,250,665         2,776,192         2,775,567           63,622         54,980         62,867         3,728,351         52,289         61,510         61,806         64,996         70,069           63,623         2,556,887         3,034,620         3,212,340         3,525,564         3,312,471         2,823,188         2,797,636           3,383,233         2,836,386         2,830,480         3,555,564         3,312,471         2,823,188         2,797,636 <th>Fire Hvdrant</th> <td>. •</td> <td>. 1</td> <td></td> <td>1</td> <td>1</td> <td>·</td> <td>ı</td> <td>•</td> <td></td> <td></td> <td></td> <td>300 67</td> <td>1 104 611</td>   | Fire Hvdrant               | . •       | . 1       |           | 1         | 1           | ·         | ı           | •         |            |            |           | 300 67    | 1 104 611   |
| 138,417         115,779         126,518         121,147         115,407         125,139         122,483         123,130           3,319,601         2,781,406         2,827,590         2,493,764         2,980,857         3,156,560         3,489,980         3,728,351         3,464,054         3,256,665         2,758,192         2,727,567           63,622         54,980         65,536         53,763         55,780         62,867         52,289         61,510         61,806         64,996         70.069           3,383,223         2,836,386         2,893,126         2,556,887         3,034,620         3,212,340         3,552,847         3,780,640         3,525,564         3,312,471         2,823,188         2,797,636  | lunioinal                  | 122 864   | 55 639    | 79.781    | 49.100    | 89,662      | 71,701    | 221,431     | 97,533    | 115,297    | 143,883    | 104,323   | 40,090    |             |
| J.3.19,601       2,781,406       2,827,590       2,493,764       2,980,857       3,156,560       3,489,980       3,728,351       3,464,054       3,250,665       2,758,192       2,727,567         3,319,601       2,781,406       2,827,590       2,493,764       2,980,857       3,156,560       3,489,980       3,728,351       3,464,054       3,250,665       2,758,192       2,727,567         63,622       54,980       65,776       55,780       62,867       52,289       61,510       61,806       64,996       70.069         3,383,223       2,836,386       2,893,126       2,556,887       3,034,620       3,512,340       3,552,847       3,780,640       3,525,564       3,312,471       2,823,188       2,797,636  | Municipat                  | 128 417   | 115 779   | 126.518   | 121.747   | 115,407     | 159,858   | 171,071     | 137,548   | 156,556    | 125,119    | 122,483   | 123,130   | 1,013,033   |
| 3.319,601       2,781,406       2,827,590       2,493,764       2,980,857       3,156,560       3,489,980       3,728,351       3,464,054       3,250,665       2,778,192       2,727,567         63,622       54,980       65,536       63,123       55,780       62,867       52,289       61,510       61,806       64,996       70.069         3,383,223       2,836,386       2,893,126       2,556,887       3,034,620       3,212,340       3,552,847       3,780,640       3,525,564       3,312,471       2,823,188       2,797,636  | Cullues                    |           |           |           | -         |             |           |             |           |            |            |           |           |             |
| <u>-0.318.007 - 2.01.700 - 2.01.007</u> - 53,763 55,780 62,867 52,289 61,510 61,806 64,996 70.069 63,622 54,980 23,83.223 2,836,386 2,893,126 2,556,887 3,034,620 3,212,340 3,552,847 3,780,640 3,525,564 3,312,471 2,823,188 2,797,636   |                            | 109 010 0 | 2 781 ADF | 2 827 590 | 2.493.764 | 2.980.857   | 3,156,560 | 3,489,980   | 3,728,351 | 3,464,054  | 3,250,665  | 2,758,192 | 2,727,567 | 36,978,587  |
| 63,622 54,980 65,536 63,123 53,763 55,780 62,867 52,289 61,510 61,806 64,996 70.069<br>3,383,223 2,836,386 2,893,126 2,556,887 3,034,620 3,212,340 3,552,847 3,780,640 3,525,564 3,312,471 2,823,188 2,797,636  | Suprotat                   | 0,010,001 | 00110117  | P1011     |           |             |           |             |           |            |            |           |           |             |
| 3,383.223 2,836,386 2,893,126 2,556,887 3,034,620 3,212,340 3,552,847 3,780,640 3,525,564 3,312,471 2,823,188 2,797,636   | LWC Water                  | 63.622    | 54,980    | 65,536    | 63,123    | 53,763      | 55,780    | 62,867      | 52,289    | 61,510     | 61,806     | 64,996    | 70,069    | 730,341     |
| 3,383,223 2,836,386 2,893,126 2,556,887 3,034,620 3,212,340 3,502,647 3,700,040 3,223,004 0,212,117 5,500,000 3   |                            |           |           |           |           |             |           | 210 011 0   | 0 700 640 | 2 675 66A  | 3 312 471  | 2 823 188 | 2.797.636 | 37.708.928  |
|   | Grand Total                | 3,383,223 | 2,836,386 | 2,893,126 | 2,556,887 | 3,034,620   | 3,212,340 | 140,200,6   | 0,100,040 | +00,020,0  | 0,016,711  | -10-01-00 |           |             |

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|      | Table 3-2<br>LWC Historical Metered Sales (mgd) |            |            |           |        |  |  |  |  |
|------|---|------------|------------|-----------|--------|--|--|--|--|
| Date | Residential                                     | Commercial | Industrial | Wholesale | Total  |  |  |  |  |
| 1971 | 33.36   | 23.92      | 30.44      | 1.54      | 89.27  |  |  |  |  |
| 1972 | 34.04   | 24.87      | 31.77      | 1.72      | 92.41  |  |  |  |  |
| 1973 | 34.03   | 27.20      | 33.33      | 1.78      | 96.35  |  |  |  |  |
| 1974 | 35.01   | 27.14      | 31.63      | 2.01      | 95.79  |  |  |  |  |
| 1975 | 35.49   | 23.65      | 31.52      | 2.11      | 92.77  |  |  |  |  |
| 1976 | 35.15   | 24.09      | 34.33      | 1.77      | 95.34  |  |  |  |  |
| 1977 | 36.13   | 26.70      | 35.77      | 1.73      | 100.33 |  |  |  |  |
| 1978 | 39.00   | 29.06      | 34.36      | 1.94      | 104.36 |  |  |  |  |
| 1979 | 36.95   | 26.71      | 32.54      | 2.00      | 98.20  |  |  |  |  |
| 1980 | 38.75   | 26.89      | 30.03      | 2.08      | 97.74  |  |  |  |  |
| 1981 | 38.30   | 26.54      | 28.09      | 2.12      | 95.04  |  |  |  |  |
| 1982 | 38.73   | 26.65      | 25.59      | 2.04      | 93.01  |  |  |  |  |
| 1983 | 41.51   | 27.75      | 23.30      | 2.13      | 94.69  |  |  |  |  |
| 1984 | 40.44   | 28.86      | 23.96      | 2.33      | 95.58  |  |  |  |  |
| 1985 | 40.23   | 29.28      | 21.41      | 2.31      | 93.22  |  |  |  |  |
| 1986 | 41.01   | 30.17      | 19.91      | 2.52      | 93.61  |  |  |  |  |
| 1987 | 40.60   | 30.58      | 19.81      | 2.75      | 93.74  |  |  |  |  |
| 1988 | 43.56   | 32.33      | 19.42      | 2.77      | 98.07  |  |  |  |  |
| 1989 | 39.83   | 32.21      | 18.60      | 3.00      | 93.65  |  |  |  |  |
| 1990 | 40.28   | 34.74      | 19.82      | 3.64      | 98.47  |  |  |  |  |
| 1991 | 41.32   | 36.47      | 19.24      | 2.11      | 99.15  |  |  |  |  |
| 1992 | 38.70   | 35.74      | 17.65      | 2.10      | 94.18  |  |  |  |  |
| 1993 | 39.82   | 36.75      | 17.74      | 2.21      | 96.52  |  |  |  |  |
| 1994 | 42.48   | 38.69      | 17.80      | 2.36      | 101.33 |  |  |  |  |
| 1995 | 41.79   | 39.51      | 17.85      | 2.64      | 101.79 |  |  |  |  |
| 1996 | 41.30   | 40.82      | 17.39      | 2.95      | 102.46 |  |  |  |  |
| 1997 | 41.99   | 41.30      | 16.91      | 3.12      | 103.30 |  |  |  |  |
| 1998 | 41.43   | 42.35      | 16.24      | 3.22      | 103.24 |  |  |  |  |
| 1999 | 46.77   | 42.64      | 16.15      | 4.18      | 112.30 |  |  |  |  |
| 2000 | 43.66   | 45.20      | 14.76      | 4.68      | 105.75 |  |  |  |  |

### 3.3 Non-Metered Water Ratio

LWC provided a summary of annual water delivered to mains and water sold for 1989 to 2000. The non-metered water is the difference between water delivery and sales. Since 1997, LWC's annual reports have chosen not to estimate the portion of non-metered water that may be due to authorized use, such as hydrant flushing or municipal uses. As summarized in Table 3-3, non-metered water has averaged 13.9 percent of delivery. Since 1997, non-metered water has been about 14.5 percent of water delivery.



Louisville Water Company

An allowance for non-metered water of 15 percent of water delivery is assumed for the projection of water demands. The ratio may tend to decrease in the future due to LWC's efforts such as the pipeline replacement and rehabilitation program and leak detection program, and may tend to increase due to causes such as increased hydrant flushing and acquisition of existing distribution systems.

|         |  | Table 3-3                  |                            |        |
|---------|--|----------------------------|----------------------------|--------|
|         | Water-Delivered                          | -to-Mains and Wa           | ter Consumption            |        |
| Үеаг    | Water Delivered to<br>Mains<br>AAD (mgd) | Water Consumption<br>(mgd) | Non-Metered Water<br>(mgd) | Ratio  |
| 1989    | 109.60                                   | 96.74                      | 12.87                      | 11.74% |
| 1990    | 114.11                                   | 101.40                     | 12.70                      | 11.13% |
| 1991    | 118.28                                   | 101.90                     | 16.38                      | 13.85% |
| 1992    | 109.96                                   | 96.09                      | 13.86                      | 12.61% |
| 1993    | 114.14                                   | 98.59                      | 15.55                      | 13.63% |
| 1994    | 124.21                                   | 103.68                     | 20.53                      | 16.53% |
| 1995    | 121.98                                   | 103.74                     | 18.24                      | 14.95% |
| 1996    | 121.27                                   | 104.10                     | 17.17                      | 14.16% |
| 1997    | 123.63                                   | 105.59                     | 18.04                      | 14.59% |
| 1998    | 124.27                                   | 105.72                     | 18.55                      | 14.93% |
| 1999    | 134.50                                   | 115.04                     | 19.46                      | 14.47% |
| 2000    | 127.16                                   | 108.97                     | 18.19                      | 14.30% |
| Average |  |                            |                            | 13.90% |

Water consumption by "Municipal" and "Fire Services & Fire Hydrants", reported in the annual reports, totaled 2.73 mgd in 1999, and 3.22 mgd in 2000. A comparison of "Water Consumption" (including "Municipal" and "Fire Services & Fire Hydrants" consumption) to the metered sales is shown in Table 3-4.

