



United States Department of the Interior

NATIONAL PARK SERVICE

Buffalo National River
402 N. Walnut, Suite 136
Harrison, AR 72601

IN REPLY REFER TO

1.A.2

February 25, 2016

Becky Keogh

Director

Arkansas Department of Environmental Quality

5301 Northshore Drive

North Little Rock, AR 72118-5317

Dear Director Keogh:

As Superintendent of Buffalo National River, I am required to manage the park in such a way that it conserves the unique scenic and scientific resources and preserves the Buffalo River as a free-flowing stream for the benefit and enjoyment of present and future generations (Public Law 92-237). Water based recreation such as canoeing, swimming, and fishing are primary recreational pursuits enjoyed by our visitors. Clean, clear water is one of the significant scenic and scientific resources of the national river and is vital to maintain. Most park visitors who see the river when it is not in flood stage remark about the clear waters. In addition, the Buffalo River downstream of the Erbie low water crossing is Designated Critical Habitat for the Rabbitsfoot mussel (*Quadrula cylindrica cylindrica*), a species listed as Threatened under the Endangered Species Act (ESA). The Buffalo River is also home to the Endangered Snuffbox mussel (*Epioblasma triquetra*). Buffalo National River provides roosting and foraging habitat for the Endangered Gray bat (*Myotis grisescens*), Indiana bat (*M. sodalis*), Ozark Big-ear bat (*Corynorhinus townsendii ingens*) and the Northern Long-eared bat (*M. septentrionalis*) which is listed as Threatened. In addition to this, the Buffalo River is considered a Blue Ribbon Smallmouth Bass stream by the Arkansas Game and Fish Commission, and provides roosting and foraging habitat for the Bald Eagle (*Haliaeetus leucocephalus*) protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).

As the delegated authority for implementing the Clean Water Act, the NPS relies upon your agency to ensure the resource of clean, clear water is not diminished. I understand that ADEQ sent out a letter on May 26, 2015 asking for information by Friday July 31, 2015. We cannot find a copy of that letter in our files, so I presume we did not receive it. On October 6, 2015, I sent a letter (Attachment 2) to Arkansas Department of Environmental Quality (ADEQ) asking that you consider placing three tributaries of the Buffalo River on the Impaired Waterbodies List pursuant to Section 303(d) of the Clean Water Act. To date, I have not received any formal correspondence relative to that request. My staff has reviewed the draft 303(d) streams list published on your website

(ADEQ, 2016) and see that these three streams are not in the draft list. I would like to receive documentation explaining why these streams were not listed in the draft 303(d) list.

My staff has reviewed the 2008 303(d) list published on your website (ADEQ, 2008) as this appears to be the latest 303(d) list which received a Record of Decision from the United States Environmental Protection Agency (USEPA, 2008). There appear to have been two segments of the Buffalo River and two tributaries listed as impaired at that time.


1. Reach 11010005-001-4J is the lower 11.3 miles of the Buffalo River which was impaired for aquatic life because of temperature. This was based upon NPS data collected at site BUFR09.
2. Reach 11010005-005-4J consists of 6.9 miles of the Buffalo River which was impaired for aquatic life because of low dissolved oxygen. This was based upon data collected by ADEQ at site WHI0049A.
3. The lower 2.6 miles of Big Creek (Reach 11010005-027-4J) was listed as impaired for aquatic life because of low dissolved oxygen. This was based upon NPS data collected at site BUFT18.
4. 23.9 miles of Bear Creek (Reach 11010005-026-4J) was listed as impaired for agricultural and industrial uses because of total dissolved solids based upon data collected at site UWBRK01+.

The current list does not show either reach of the Buffalo River in the table showing streams removed from the list in 2016 (ADEQ, 2016b) or the table showing the draft list of impaired waterbodies for 2016 (ADEQ, 2016a). Since the 2010, 2012, and 2014 lists do not appear to have been approved by an EPA Record of Decision, would ADEQ still need to list these two segments of the Buffalo River in one or the other table? Can you provide me with documentation to show why these streams were removed, and that their removal was appropriate?

Buffalo National River is the first National River, designated by Congress on March 1, 1972 (Public Law 92-237; 16 U.S.C. 460m-8 et seq.) to conserve and interpret an area containing unique scenic and scientific features, and preserve as a free-flowing stream an important segment of the Buffalo River in Arkansas for the benefit and enjoyment of present and future generations. In addition, National Park Service Management Policy (2006) specifically calls for park units to work with the appropriate governmental bodies to obtain the highest possible standards available under the Clean Water Act for the protection of park waters; and take all necessary actions to maintain or restore the quality of surface waters and groundwaters consistent with the Clean Water Act and all other applicable federal, state and local laws and regulations. We would very much like to work with you collaboratively in support of these values and this important Act. If the ADEQ does not believe a 303d listing to be appropriate, we would like to discuss other mechanisms to address the impaired water quality.

Thank you for your attention to this matter. I look forward to receiving your response.

Sincerely,



Kevin G. Cheri
Superintendent

Attachment 1: References Cited

Attachment 2: October 6, 2015 letter to ADEQ

Cc: Nancy Finley
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Natural Resource Stewardship and Science
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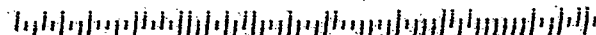
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MAILED FROM ZIP CODE 72601

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NATIONAL PARK SERVICE

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March 10, 2016

Becky Keogh

Director

Arkansas Department of Environmental Quality

5301 Northshore Drive

North Little Rock, AR 72118-5317

REFERENCE: Arkansas 2016 list of impaired streams, 303(d) list

Dear Director Keogh:

This letter is a follow up to the public comments submitted by Natural Resource Program Manager Chuck Bitting on behalf of the National Park Service at the March 1, 2016 public hearing on the proposed 2016 303(d) list for Arkansas. With this letter, we provide further data analysis of why two new streams should be added to the list of impaired waterbodies, and why a third should have an additional impairment parameter added. The information we are submitting is based solely upon Arkansas Pollution Control and Ecology Commission (APC&E) Regulation 2 (Reg. 2). While we recognize that ADEQ must have an assessment methodology for determining which streams to add or remove from the 303(d) list, we also recognize that the 2016 assessment methodology for Arkansas is in draft form.

The three streams of concern are Mill Creek (sampling station BUF-T04), Big Creek at Carver (sampling station BUF-T06 (USGS Station 7055814)) and Bear Creek at USGS Station 7056515. Mill Creek and Big Creek are completely within the Boston Mountains Ecoregion as shown on Plate BM-2 (page A-14) in Appendix A of Reg. 2. Bear Creek, except for the very lowest reach, is also within the Boston Mountains Ecoregion and is shown on Plate BM-2. The Boston Mountains Ecoregion designated uses and water quality standards apply to each of these three streams (A-11 and A-12). All three of these streams have watersheds in excess of 10 square miles.

Mill Creek is a significant tributary to the Buffalo River with the confluence at Pruitt. Dye tracing studies have shown that Mill Creek gets much of its recharge waters from the Crooked Creek watershed through inter-basin transport in the karst system; much of this groundwater surfaces from two large springs at Marble Falls on the property of the former Dogpatch USA theme park. These large springs and the rest of Mill Creek contribute a large percentage of the base flow of the Buffalo River where Mill Creek joins the river. A study by Maner and Mott in 1991¹ showed that Mill Creek contributes 96 percent of the nitrate loading to the Buffalo River at

their confluence. In the last year, we have collected a substantial amount of *Escherichia coli* (*E. coli*) data from Mill Creek. The data indicate the stream is often impaired because of *E. coli*. The Extraordinary Resource Water (ERW) *E. coli* limit on streams during the primary contact recreation period of May 1 to September 30 for an individual sample is 298 colonies per 100 ml, or a geometric mean of 126 colonies per 100 ml (Figure 2). For non-ERW streams, the individual sample limit is 410 colonies per 100 ml.

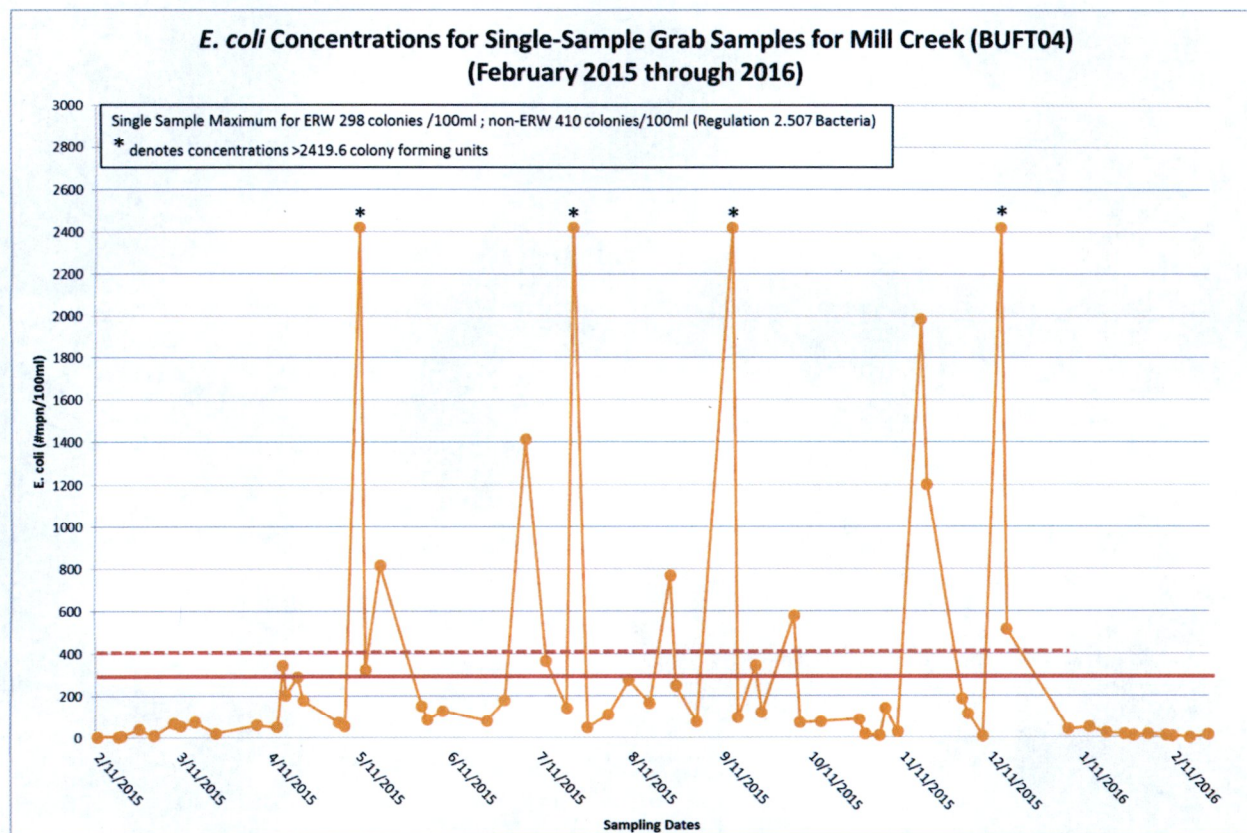


Figure 1: Station BUF-T04 *E. coli* individual sample results, February 2015 to February 2016.

During the monitoring period, February 2015 through February 2016, there were fifteen occurrences where the *E. coli* concentration was equal or above 298 colony forming units (cfu) per 100-ml, and eleven occurrences above 410 cfu per 100-ml. Of the concentrations above 410 cfu per 100-ml, six samples were during the Primary Contact period and three samples had a concentration >2419.6 cfu/100ml. During the monitoring period, seven months were found to be above the geometric mean of 126 cfu per 100-ml. This equates to four months of the Primary Contact period having conditions that posed an elevated risk to human health for water-based recreation, which is the ultimate designated use within the park. It is our opinion, in light of Reg. 2 Bacteria criteria, that Mill Creek is non-compliant with Arkansas water quality standards and should be considered for listing in the 303(d) process.

Big Creek is another major tributary to the Buffalo discharging into the river at Carver. Dissolved oxygen levels on Big Creek have been oscillating strongly during the summer months (Figure 3). According to Reg. 2, Appendix A, the dissolved oxygen standard for this stream is 6

mg/l. USGS began collecting real time dissolved oxygen data on Big Creek in June of 2014. During 2014, the dissolved oxygen in Big Creek dropped below 6 mg/l for 458 hours during

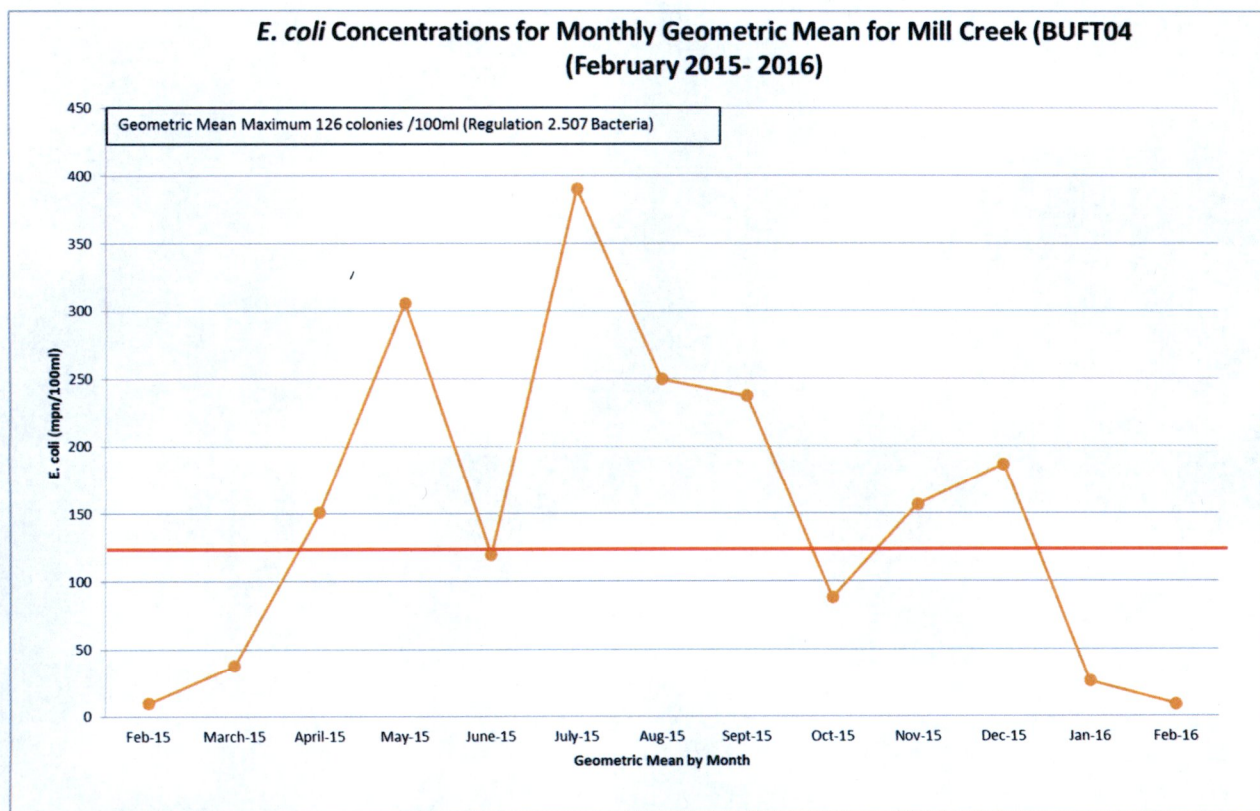


Figure 2: Station BUF-T04 *E. coli* geometric mean data, February 2015 to February 2016

59 days. For 33 of these 59 days, the dissolved oxygen remained depressed below 6 mg/l for more than eight hours. Big Creek dropped below 5 mg/l for 110 hours and 45 minutes during twenty days. The dissolved oxygen remained depressed below 5 mg/l for more than eight hours in six of these twenty days. The dissolved oxygen dropped to a low of 4 mg/l on August 28, 2014. Dissolved oxygen conditions in the summer of 2015 were not unlike that of 2014, and all of these data were available to ADEQ during the consideration period for the 303(d) listing process. We cannot understand why Big Creek failed to be considered in listing process when data supplied by USGS clearly indicated impairment based on ADEQ's own standards.

Bear Creek has a similar dissolved oxygen issue as Big Creek (Figure 4). Bear Creek is already listed on the 303(d) list for Total Dissolved Solids at site UWBRK01; however, many times during July to September 2014 and again in 2015, dissolved oxygen readings below 6 mg/L were recorded at the USGS station 07056515. We believe these values should place Bear Creek on the 303(d) list for dissolved oxygen impairment based on the information provided in Reg. 2.



USGS 07055814 Big Creek at Carver, AR

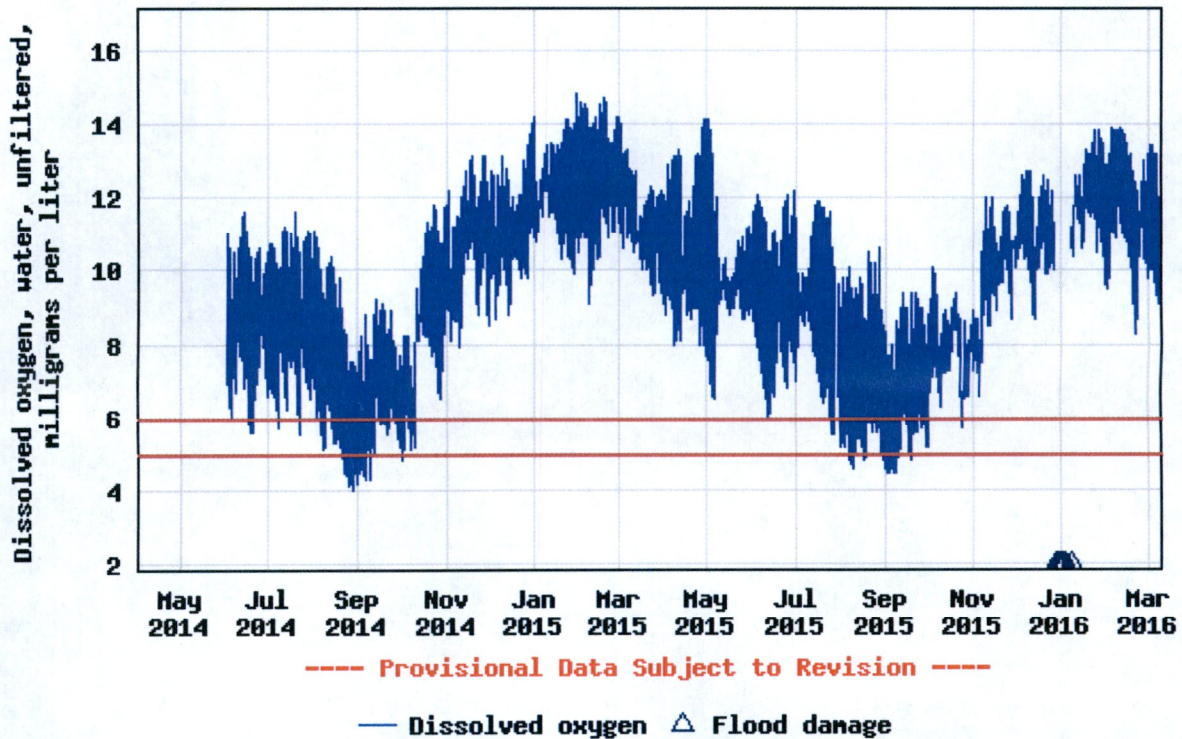


Figure 3: Station BUF-T06 Dissolved Oxygen data June 2014 to March 2016

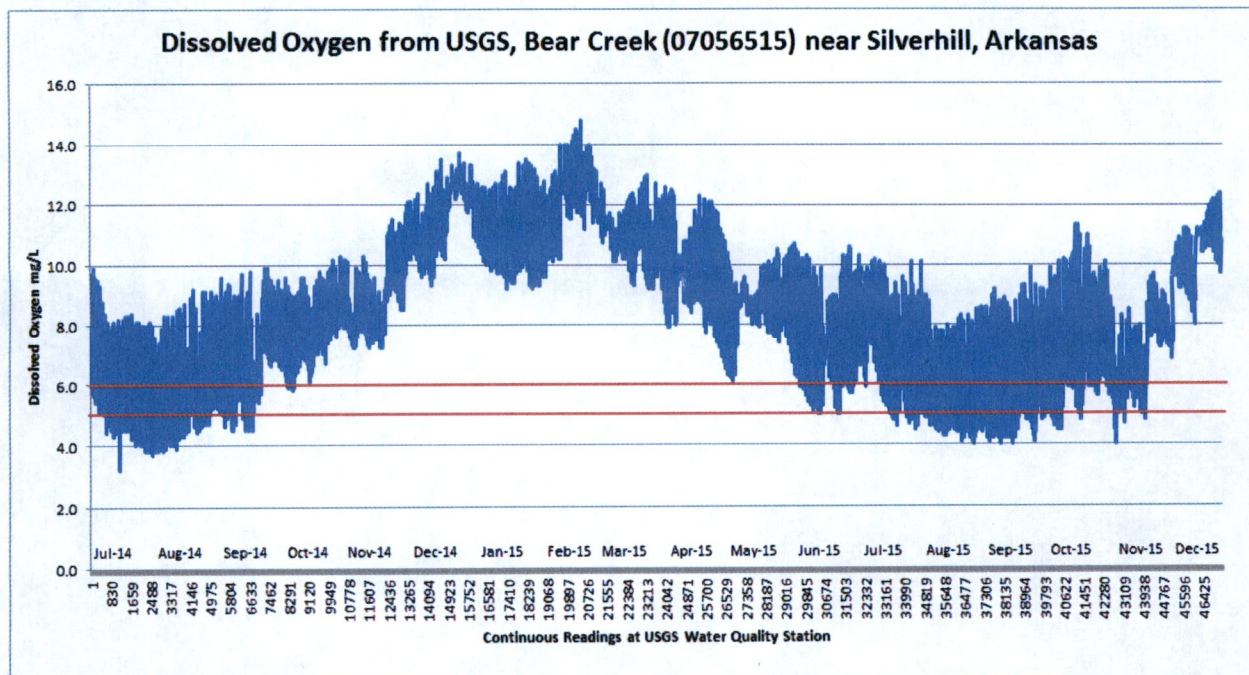


Figure 4: Station UWBRK01 Dissolved Oxygen Data, July 2014 to December 2015

We would like to point out that while the Buffalo River is an ERW under Reg. 2, the Regulations implementing the Clean Water Act consider the Buffalo River, and its tributaries (at least those included within the boundary) to be outstanding National resource waters:

Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. [emphasis added] [40 CFR§131.12(a)(3)]

Furthermore, Reg. 2.302(A) describes Extraordinary Resource Waters as:

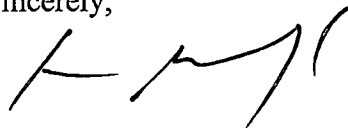
This beneficial use is a combination of the chemical, physical, and biological characteristics of a waterbody and its watershed which is characterized by scenic beauty, aesthetics, scientific values, broad scope recreation potential and intangible social values. [emphasis added]

This indicates that the watershed of the all of the Buffalo River should be considered part of the ERW and should be held to the highest water quality standards.

Buffalo National River hosted 1.36 million visitors in 2014. A large percentage of these visitors are interested in water-based, primary contact recreation and should expect the water quality to be high, whether it is the Buffalo River or one of its tributaries. We owe it to our visitors to hold these tributaries to the highest standards.

We look forward to collaboratively resolving this issue.

Sincerely,



Kevin G. Cheri
Superintendent

Cc: Laura Hunt, EPA, Region 6
Kane Webb, Director, Arkansas Parks and Tourism
Nathaniel Smith, MD, Director, Arkansas Department of Health
Mike Knoedl, Director, Arkansas Game and Fish Commission

¹ Maner, M. and Mott, D., 1991. Mill Creek Survey: Arkansas Department of Pollution Control and Ecology, Little Rock, Arkansas.

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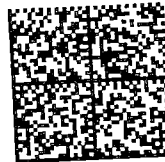
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