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**VIA ELECTRONIC MAIL**

June 23, 2016

*Re: Comments on Worlds of Fun Second Draft Missouri State Operating Permit  
No. MO-0103659*

Dear Sir or Madam:

The following comments are submitted by Great Rivers Environmental Law Center (“Great Rivers”) on behalf of Missouri Coalition for the Environment (“MCE”) concerning the reissuance of Second Draft Missouri State Operating Permit No. MO-0103659 (“Second Draft Permit”) to Worlds of Fun (“WOF”).

MCE is a nonprofit independent, citizen’s environmental organization advocating for clean water, clean air, clean energy and a healthy environment. MCE works to protect and restore the environment through education, public engagement, and legal action. Its members use the waters of Missouri for drinking water, recreation, and enjoyment.

The proposed Second Draft Permit would likely increase the amount of pollutants allowed to enter Shoal Creek and the Missouri River, thus contributing to the impairment of water quality and the environment. MCE urges MDNR to edit the Second Draft Permit to address MCE’s comments in this letter because the permit as currently written is contrary to the intent of the Clean Water Act and would contribute to the continued degradation of Missouri’s

waterways.

MDNR reissued the Second Draft Permit due to “significant changes”<sup>1</sup> since the First Draft Permit. However, MDNR does not explain what “significant changes” have occurred since June 2015 to warrant the differences between the First Draft Permit and the Second Draft Permit. Similarly, the Second Draft Permit is significantly different than the existing Permit. To the extent that these differences are based on changes in operation at the facility, or changes in the how the facility uses and manages its wastewater and stormwater, MDNR should explain these changes in the Second Draft Permit or Fact Sheet so that the public can understand the basis for these changes.<sup>2</sup>

While many of MCE’s comments on the First Draft Permit are rendered moot due to the “significant changes” in the Second Draft Permit, MCE hereby incorporates its comments to the First Draft Permit from July 13, 2015 (“First Comment Letter”) as if fully set forth herein. A copy of said comments are attached hereto for MDNR’s convenience as Exhibit 1. This comment letter will refer to the contents of the First Comment Letter where appropriate and to avoid duplication.

**I. WOF discharges process wastewater and other non-stormwater and the effluent limits from the 2008 permit should remain in effect.**

In the draft Permit, MDNR is proposing to remove many of the effluent limitations in the existing Permit because the Permittee only discharges stormwater or has “extremely low frequency, high volume discharges.”<sup>3</sup> But the Permit recognizes that WOF does, in fact, have non-stormwater discharges. The water from WOF’s various rides that is discharged from the facility is process wastewater and other non-stormwater effluents from pollutant-generating park activities such as ride maintenance and artificial lake draining. WOF’s own comments to the Second Draft Permit suggested the following language be incorporated into the permit: “Since Outfalls #007, #008, #009, and #010 consist of discharges from rides and attractions that contain chlorine, effluent limitations for chlorine will remain in the permit.”<sup>4</sup> Discharges from these outfalls are clearly process wastewater and not stormwater and do not necessarily require a precipitation event to occur. Various DMRs submitted by WOF show that the facility is discharging pollutants in excess of permitted levels into the unnamed tributary to Shoal Creek

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<sup>1</sup> Letter from Chris Wieberg, MDNR Chief, Operating Permit Section, to Bob Menees dated April 19, 2016.

<sup>2</sup> For example, in WOF’s application for its 2008 Permit, it indicated that the application was not “for storm water discharges only” and that it discharged 28,000 gallons per day of wastewater from the “washdown of paved areas” and irrigation. In WOF’s application for its new Permit, it indicated that the application was only for storm water discharges, and did not mention anything about park washdown. The Second Draft Permit and/or its Fact Sheet should explain what changes have occurred at the facility, including what changes have occurred regarding how the facility treats or manages its “washdown” water, since the facility filed its 2008 Permit application.

<sup>3</sup> Second Draft Permit Fact Sheet at 9.

<sup>4</sup> WOF’s “Comments on Pre-Draft Permit No. MO-0103659” dated April 5, 2016, Comment #5.

and from various outfalls when there has been no current or immediately prior precipitation event as demonstrated by Exhibit 2.<sup>5</sup> While discharges at the facility may be exacerbated by precipitation events (i.e. actual flow depends on precipitation), the mixing of process wastewater and stormwater requires permit regulation as process wastewater and not just stormwater.<sup>6</sup> Therefore, the permit should contain strict effluent limitations rather than non-enforceable benchmarks for stormwater only. This position is further supported by a comparison to the permit for Six Flags (MSOP # MO-0105473), the most similar facility in the state, which specifically identifies water from rides as process wastewater and not only stormwater and regulates the facility with effluent limitations and not benchmarks.<sup>7</sup>

Furthermore, WOF's 2007 permit application contains a chart demonstrating WOF's daily usage of publicly supplied water and where the water flows. The chart shows that each day WOF uses 17,000 gallons per day to "washdown" walkways and other park features. This water is not stormwater, but process wastewater, which collects various pollutants that are discharged from the facility in the absence of rainfall. These discharges are thus not "acute" as described in the draft permit for precipitation-driven discharges of stormwater; however, they may be exacerbated by precipitation events (i.e. actual flow depends on precipitation). Water used for washdown is likely another reason why WOF has reported DMR samples that have exceedances of effluent limits when no precipitation event has occurred or been reported in rainfall logs as mentioned above.<sup>8</sup>

MDNR cannot now claim that WOF is only discharging stormwater after decades of regulation under an Individual NPDES permit for non-stormwater discharges without providing compelling evidence that this is in fact the case. WOF's permit should continue to recognize that the facility discharges polluted process wastewater and other non-stormwater off the property and regulate these discharges accordingly. Because WOF is discharging process wastewater from a variety of pollutant-generating sources and activities (and not just stormwater), which contains unacceptable quantities of pollutants that are discharged frequently and chronically as opposed to acutely and sporadically, the original effluent limitations in the 2008 permit should

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<sup>5</sup> The chart clearly demonstrates that the facility has reported violations during and immediately subsequent to precipitation events as well as when there has been no recorded rainfall event prior to sampling and reported violations.

<sup>6</sup> See NPDES Permit Writers' Manual at 5-43 ("Stormwater not regulated by effluent guidelines that is commingled with process wastewater will require the adjustment of the effluent limitations[.]"); *Id.* at 5-37 (providing a BPJ process to determining a technology-based effluent limitation for combined wastewaters).

<sup>7</sup> Six Flag's Permit states: "There are two outfalls at this facility outfall # 001 is generated from *process wastewater* from rides like Thunder River, Log Flume, and Scooby Doo drainage and stormwater discharges that goes through, de-chlorination and 3-cell settling basins." (emphasis added). Additionally, the permit states: "Outfall #002 is generated from *process wastewater* from Tidal Wave drainage ride and stormwater discharges that goes through a submerged de-chlorination device and a single settling basin." (emphasis added).

<sup>8</sup> See Exhibit 2, which clearly demonstrates that many of the effluent limit violations reported by WOF occurred at times when there was no reported rainfall soon enough prior to a sampling event to cause discharges resulting in effluent limit violations.

be retained to ensure protection of water quality in Shoal Creek and the Missouri River.

## **II. Because WOF frequently discharges process wastewater and not just stormwater, the Second Draft Permit constitutes backsliding by making the proposed permit less strict than the current permit**

As a means of preventing backsliding, the Clean Water Act prohibits NPDES permitting agencies from issuing permits that are “less stringent” than previous permits.<sup>9</sup> While the Act does provide limited exceptions to the anti-backsliding prohibition,<sup>10</sup> the rationale provided by MDNR does not meet the criteria for the exceptions in the regulation. The Second Draft Permit Fact Sheet states that the Anti-backsliding provisions of the CWA are not violated because of misinterpretations of law and fact in the current permit. However, MDNR was interpreting and implementing the CWA correctly when it issued WOF its current permit in 2008 as stated above in Section I. Because WOF discharges process wastewater from its facility, the Second Draft Permit violates the Anti-backsliding provisions of the CWA as previously stated by MCE in its First Comment Letter, Section III, which is incorporated as if fully set forth herein.

The Fact Sheet attempts to justify the backsliding in the Second Draft Permit by stating that effluent limits were incorrectly established based on the fact that WOF is not a domestic wastewater treatment facility and because water quality standards cannot be set for acute discharges of stormwater.<sup>11</sup> However, as mentioned above, the discharges from the facility do not only occur acutely during and after precipitation events as demonstrated by Exhibit 2 and the facility’s use of washdown water. While actual flow may depend on precipitation events, the facility has been and will continue to discharge pollutants that will have harmful impacts on water quality and aquatic life. As drafted, the Second Draft Permit constitutes backsliding and violates the Clean Water Act.

## **III. WOF significantly and frequently violated its current permit for chlorine and will continue to violate the proposed Second Draft Permit**

In the Second Draft Permit, MDNR states that “[a]ll violations of [Total Residual Chlorine] were false violations and the department has retracted those notices. The previous permit allowed submittal of TRC values up to 130 µg/L (0.13 mg/L) due to the method detection limit for the analyses of this parameter.”<sup>12</sup> MCE in its notice letter set forth WOF’s frequent and significant violations of chlorine limits from September 2010 to September 2015.<sup>13</sup> As demonstrated in Exhibit 3 attached hereto, almost all of WOF’s chlorine violations from various outfalls from April 2010 to the present were significantly in excess of the minimum detect level of 0.13 mg/L and permitted effluent limits.<sup>14</sup> Furthermore, the June 16, 2015 Compliance

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<sup>9</sup> See 33 U.S.C. § 1342(o)(1).

<sup>10</sup> See Draft Permit Fact Sheet at 9; see also 33 U.S.C. § 1342(o)(2).

<sup>11</sup> Fact Sheet, Pages 9-10.

<sup>12</sup> Fact Sheet, Page 2.

<sup>13</sup> See MCE’s Notice of Intent to Sue Letter dated September 11, 2015, Exhibit A.

<sup>14</sup> MCE received DMRs from MDNR for the years 2008, 2009, and part of 2010 that reported various values of 0.1 mg/L and 0.09 mg/L. MCE has not been provided an answer as to whether

Inspection conducted by MDNR resulted in a sample from Outfall #009 with test results demonstrating TRC levels of 2200 µg/L (2.2 mg/L). This exceedance is significantly above the minimum detect level of 130 ug/L, and even more significantly above the actual effluent limit, which is approximately ten times lower than the minimum detect level. This sample, which was taken and tested by trained MDNR staff, and which is representative of other violations reported by WOF, cannot be considered a false violation because it clearly exceeds both the effluent limit and the minimum detect level. Additionally, in April 2016, WOF reported a violation of 1 mg/L (1000 ug/L) at Outfall #007, again significantly above the minimum detect level of 130 ug/L, and even more significantly above the actual effluent limit, which is approximately ten times lower than the minimum detect level.<sup>15</sup>

This language in the Fact Sheet should therefore be retracted and the chart illustrating the facility compliance history on Page 2 and 3 should be amended to include all chlorine violations that are higher than the minimum detect level as identified in Exhibit 3. Additionally, as discussed below in Section V, WOF's clear and chronic history of violating its chlorine effluent limits requires MDNR to establish a Schedule of Compliance so that WOF will meet these permitted effluent limits in the future.

#### **IV. MDNR should require WOF to meet the actual effluent limitations for chlorine in its Permit**

The Draft Permit at page 9 (Section A, Note 6) states that the effluent limitation for Total Residual Chlorine “is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods”—which MDNR contends is DPD Colorimetric Method #4500-CL G, and which MDNR suggests has an ML of 130 ug/L (or 0.13 mg/L).<sup>16</sup> Thus, the Draft Permit states that “values less than the minimum quantification level of 130 ug/L will be considered to be in compliance with the permit limitation.” *Id.*

This provision is inconsistent with EPA regulations and guidance, and is factually incorrect. Federal NPDES regulations require that all NPDES permits include monitoring

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these were reporting errors or whether WOF has sampling capacity that can detect a lower limit as requested in its Comment Letter on the First Draft Permit. See Exhibit 1, Section IV. These discrepancies should be explained in the permit, and the actual testing method used by WOF during these times of alleged reporting error should be stated in the permit. Regardless, none of the violations in Exhibit 3 contain this potential reporting problem and are clearly, and significantly, above the minimum detect level of 0.13 mg/L.

<sup>15</sup> WOF's contention in its April 2016 DMR that the history of the facility's non-compliance with chlorine limits is due to the public water supply is questionable at best. However, even if high chlorine levels are due to the public water WOF gets from the City, the Clean Water Act imposes strict liability on permit holders, and WOF is responsible for whatever comes out of its outfalls, regardless of the source.

<sup>16</sup> See also MDNR, Monitoring Conditions / Other Considerations / Analytical Detection Levels -Total Residual Chlorine, available at [http://dnr.mo.gov/env/wpp/permits/manual/docs/6\\_1\\_5\\_3.pdf](http://dnr.mo.gov/env/wpp/permits/manual/docs/6_1_5_3.pdf)

requirements using “sufficiently sensitive test procedures” approved by EPA under 40 C.F.R. part 136.<sup>17</sup> A method is “sufficiently sensitive” when:

- (1) The method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
- (2) The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.<sup>18</sup>

Thus, because the Draft Permit includes TRC limits of 19 ug/L (daily maximum) and 10 ug/L (monthly average), MDNR must require that Worlds of Fun use the method with the “the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O,”<sup>19</sup> and not “the most common and practical EPA approved CLTRC method.”

There are at least six EPA-approved monitoring methods for TRC.<sup>20</sup> For the method referenced by MDNR in the Draft Permit (4500-CL G), EPA long ago noted that the ML for that method is in the range of 0.010 to 0.030 mg/L, much lower than MDNR states in the Draft Permit.<sup>21</sup> While MCE had not performed an exhaustive search to determine whether any of the other EPA-approved test methods for TRC have a lower ML, it is clear that MDNR’s assumed ML of 0.13 mg/L is inaccurate, inconsistent with EPA regulations, and not reflective of current science.

MDNR must delete Note 6, paragraph (a) from page 9 of the Draft Permit, and must be amended to require that Worlds of Fun use a “sufficiently sensitive” test method.

## **V. WOF should be required to comply with a Schedule of Compliance**

The justification for excluding a Schedule of Compliance in the Second Draft Permit is that “[t]here are not any more stringent effluent limitations in this permit.”<sup>22</sup> However, there are clearly still effluent limits for various outfalls related to copper (Outfalls #008, #009, and #010) and chlorine (Outfalls #007, #008, #009, and #010). These outfalls will still have effluent limits and each of these outfalls has been frequent sources of reported violations for both copper and chlorine in the past.<sup>23</sup> Even if MDNR refuses to acknowledge that the facility discharges process

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<sup>17</sup> 40 C.F.R. § 122.44(i)(1)(iv).

<sup>18</sup> *Id.* at § 122.44(i)(1)(iv)(A) and (C).

<sup>19</sup> *Id.*

<sup>20</sup> See 40 C.F.R. § 136.3(a), Table IB.

<sup>21</sup> Memorandum from James Pendergast, Acting Director, Permits Division, USEPA, to John C. Hall, Hall & Associates (August 11, 1998), available at <https://www3.epa.gov/npdes/pubs/owm0468.pdf>

<sup>22</sup> Fact Sheet, Page 12.

<sup>23</sup> For chlorine violations from the outfalls that will have effluent limits under the proposed permit, see Exhibit 3 and Note \*\*\*\*.

wastewater, the effluent limitations in the Second Draft Permit for chlorine and copper are sufficient to require system upgrades through a schedule of compliance because WOF has failed to meet chlorine and copper limits under its prior permit and will continue to do so under the proposed permit. To comply with the proposed permit, the facility must implement significant system upgrades in handling effluent and this can only be achieved through enforceable compliance milestones.

DMRs submitted by the facility from November 2008 until the present demonstrate that the facility has never been able to meet its interim or final permitted effluent limits for chlorine and copper.<sup>24</sup> More importantly, comparing WOF's historic discharges to the less stringent effluent limits proposed in the Second Draft Permit demonstrates that WOF has not and will not be able to meet even these more lenient limits going forward.<sup>25</sup> For example, WOF's April 2016 DMR reports a violation of 1 mg/L (1000 ug/L) at Outfall #007 which is significantly higher than the proposed effluent limit of 19 ug/L and this outfall will retain an effluent limit for chlorine. The only way to ensure that WOF can comply with the effluent limits in its permit going forward is to require WOF to comply with a Schedule of Compliance that requires system upgrades to comply with such limits.

**VI. Outfall #010, as the In-stream Compliance Point, should require monitoring after every rain event over 0.1 inches**

MCE agrees that Outfall #010 should have daily and monthly effluent limits for chlorine and copper. However, the permit only requires WOF to sample for chlorine and copper once per month for these parameters. Pursuant to 40 C.F.R. 122.48(b), monitoring requirements must be representative of the actual discharges. Additionally, according to the EPA Permit Writer's Manual, monitoring requirements must be capable of ascertaining compliance with all effluent limits.<sup>26</sup> Sampling only once per month at an outfall is insufficient to verify compliance with a daily and monthly maximum limit at that outfall. Thus, WOF should be required to sample at this outfall after every discrete rainfall event (i.e. no precipitation event within the 72 preceding hours), given the severity of past violations at the facility and the fact that this monitoring point is representative of the actual discharges from the facility into the unnamed tributary, which is now a classified stream and will ultimately be subject to numeric water quality standards.<sup>27</sup> Also, sampling only once per month at this outfall will result in a violation of the monthly effluent limit each time there is a violation of the daily limit, which is to the detriment of the

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<sup>24</sup> Exhibit 3 clearly demonstrates that WOF will not be able to meet the proposed effluent limits for chlorine at Outfalls #007, #008, #009, and #010.

<sup>25</sup> *Id.*

<sup>26</sup> The EPA's Permit Writer's Manual at Section 8.1.3 states: "The permit writer should establish monitoring frequencies sufficient to characterize the effluent quality and to detect events of noncompliance..."

<sup>27</sup> The EPA's Permit Writer's Manual at Section 8.1.3 states: "Compliance history. The monitoring frequency might need to be adjusted to reflect the compliance history of the facility. A facility with problems achieving compliance generally should be required to perform more frequent monitoring to characterize the source or cause of the problems or to detect noncompliance."

facility, unless it believes that it will have more daily limit violations.<sup>28</sup> Since the facility claims that its discharges are acute and only occur after precipitation events, WOF should be required to sample these acute discharges after each discrete precipitation event given the history of violations reported in the past.

**VII. The Fact Sheet should be amended to reflect the true compliance history of the facility, including the inspections conducted by MDNR on June 15, 2015 and the chlorine violations discussed in Section III above.**

The Fact Sheet states that “[t]he most recent site inspection to determine compliance with MSOP #MO-0103659 was conducted on November 18, 2012.”<sup>29</sup> This statement is incorrect. MDNR clearly conducted a Compliance Inspection on June 16, 2015, which resulted in the issuance of NOV #KC2015061717064014 for significant violations of chlorine effluent limits and copper effluent limits.<sup>30</sup> The Fact Sheet should be amended to include this compliance history. Additionally, the Fact Sheet states “[d]uring review of the permit application and permit renewal process, department staff conducted a site-inspection for informational purposes only. This was not a compliance inspection.”<sup>31</sup> MDNR should provide the date on which this inspection occurred in the Fact Sheet to distinguish this inspection from the June 16, 2015 Compliance Inspection. As discussed above, the chlorine violations in Exhibit 3 should be incorporated into the chart in the Fact Sheet that documents the various violations by WOF. Additionally, the section in the Fact Sheet entitled “Compliance and Enforcement” should state “Applicable” (rather than “Not Applicable”) due to the ongoing enforcement action against the facility as recognized in the subsequent text.<sup>32</sup>

**VIII. MDNR should require WOF to sample on days when the facility has a non-stormwater discharge**

The Second Draft Permit requires that “all samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event.”<sup>33</sup> The permit goes on to say that “[i]f a precipitation event does not occur within the reporting period, report as **no discharge**.”<sup>34</sup> But as mentioned above and as shown in Exhibit 2, WOF regularly samples on days when there has been no rainfall within 72 hours at the facility. Even on these days—when there is no

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<sup>28</sup> Given the frequency of rainfall at certain points in the year and WOF’s history of exceeding its permit limits, it would not be surprising that if WOF sampled after every rain event, they would report a higher overall quantity of daily maximum violations. However, if WOF is discharging pollutants in excess of permitted levels from the facility after every discrete rainfall event, then only requiring monitoring once per month is not protective of water quality and will not deter the facility from polluting waters of the state.

<sup>29</sup> Fact Sheet, Page 2.

<sup>30</sup> See Compliance Inspection Report dated June 16, 2015.

<sup>31</sup> Fact Sheet, Page 3.

<sup>32</sup> Fact Sheet, Page 12.

<sup>33</sup> See Second Draft Permit at 9, note 1.

<sup>34</sup> *Id.* (emphasis in original).



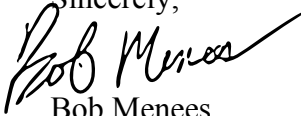
stormwater discharge—WOF’s DMRs demonstrate that there is a discharge from some of the outfalls that is sufficient for WOF to sample. *See e.g.*, Exhibit 4 (WOF’s May 2014 DMR).<sup>35</sup> Thus, the Second Draft Permit allows WOF to report “no discharge” for a particular month, when there very well may be a non-stormwater discharge.

MDNR should not allow this to occur. Instead, the Second Draft Permit should be rewritten to reflect the fact that WOF has both stormwater discharges and process wastewater discharges. WOF should be required to sample (at least once a month, but preferably more) and report the effluent amounts present in both its stormwater and process wastewater (i.e., non-stormwater) discharges. Hence, for each month the Permit should require WOF to take at least two separate samples: one from a stormwater discharge, and one from a process wastewater discharge. If there was no measurable precipitation event for a particular month, WOF would report “no stormwater discharge”, but WOF would still be required to sample and report on any process wastewater discharges that occurred that month. Likewise, if there was no process wastewater discharge, WOF would report “no process wastewater discharge” to MDNR, but WOF would still be required to monitor and report any stormwater discharges that occurred.

### CONCLUSION

The Second Draft Permit undermines the intent and purpose of the Clean Water Act by permitting WOF to discharge more pollutants into waters of the state than the previous permit under the guise of minor, acute stormwater discharges when in fact the facility is a major source of process wastewater and other non-stormwater discharges that have significant impacts on water quality and aquatic life in the Shoal Creek Watershed and ultimately, the Missouri River. The Second Draft Permit turns a blind eye to WOF’s lengthy and significant non-compliance with its NPDES permit and allows WOF to skirt its obligations under the Clean Water Act through weakened regulation rather than compliance. The Second Draft Permit as proposed with the current modifications is unreasonable and unacceptable, and MDNR should not issue a Final Permit until MCE’s concerns are addressed.

Thank you for accepting and considering these comments. We look forward to your response.

Sincerely,  
  
Bob Menees  
Staff Attorney

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<sup>35</sup> For example, the May 2014 DMR shows that WOF took its samples on May 9, *see* Exhibit 4 at 12, and that it sampled from Outfalls 1, 5, 9, and 10, and from basins at Outfalls 6, 7, and 8. *See id.* at 11. But there was no measurable rainfall in May until May 24, *see id.* at 1–10, so the flow from the outfalls must not have been stormwater.