

**Notes on Judge Telfer's 1/31/20 Final Order on the Rainbow MFL**  
(# refer to paragraphs)

Page 4-6 lists issues to be litigated

25 – Cites rule 62-40.473, the State Water Resource Implementation Rule, listing 10 WRVs

29 – MFL is in Proposed Rule 40D-8.041(22)

32,33 – Long quote from Leeper describing baseline flow, assessment of harm

34 – 15% reduction in flow used to define significant harm

35 – Peer review says methodology meets legal requirements

37 thru 46 – summary of District's evaluation of WRVs

**Pre-Hearing Stip Issues:**

- **Whether the Northern District Model Version 4 or 5 is the best information available to determine the impact of water withdrawals on the flow in the Rainbow River System.**
- **Whether the Northern District Model Version 4 or 5 used to establish the proposed Minimum Flow misrepresent[s] Rainbow Springs historic flows.**
- **Whether the proposed Minimum Flow misuses a regional model to estimate local groundwater impact.**
- **Whether the period of record used to calculate historical flows of the Rainbow River is arbitrary or the best information available.**

47 – Petitioners' assertions re NDM vs. mass-balance models and period of record

50 – Notes that NDM4 wasn't peer reviewed although NDM5 was

53 – Quotes Basso that NDM4 allowed the District to assess the cumulative effect of thousands of well users, which was something a more localized model could not do effectively.

54 – Long quote from Basso on model calibration

55 – Model shows a 1.7 percent flow reduction in 2010

56 – Two percent reduction projected in 2035

57 – District did use a water budget (cf. to petitioners' mass-balance model). This water budget analysis verified the NDM results of 1-2% reduction in flow based on groundwater withdrawals.

58 - Based on the results of the NDM as well as the water budget analysis, SWFWMD calculated that groundwater withdrawal impacts on the RRS have resulted in a 1-2% reduction in flow from its 1965 "no impact" rate. Evidence established that the RRS has experienced a 20% reduction in flow since 1965. The District has attributed that reduction to rainfall variation, as opposed to groundwater withdrawal. The evidence was persuasive that spring flow is lower after 2000, but not because of groundwater withdrawals, as current groundwater use is the lowest since the mid-1990's, due to water conservation and slower population growth. Instead, evidence suggests that lower spring flow is because of lower

rainfall. Based on the NDM predictions of a 1-2% reduction in flow because of groundwater withdrawals, which the District projected to increase to 2.5 percent in 2035, the District chose a recommended minimum flow allowance of 5%.

59 – POR starts in 1965.

61 - Petitioners' experts testified that NDM contained numerous limitations that resulted in errors in the estimation of flow in the RRS. Dr. Knight testified that the errors in the NDM resulted in an underestimation of flows in the Rainbow River System of over 60 percent.

62 – Knight's model predicts an 11% decrease from pumping.

63 – POR should have extended back into 1920s.

64 - Preponderance of evidence establishes that the District's use of NDM to assess groundwater withdrawal impacts on the RRS, in calculation of the MFL, was the best information available to develop the Proposed Rule, and is supported by facts and logic. The District did not act irrationally, or without thought or reason, in its assessment of groundwater withdrawal impacts.

65 – Re period of record, the issue is not one of which record is better but whether district acted irrationally, and they didn't.

**Pre-Hearing Stip Issues:**

- **Whether the failure to address the impact of algal accumulation and its relationship to flow before adoption of Proposed Rule 40D8.041(22), F.A.C., was arbitrary, and contravenes the law it is implementing, Section 373.042, F.S.**
- **Whether the failure to address nutrient pollution and its relationship to flow before adoption of Proposed Rule 40D-8.041(22), F.A.C., was arbitrary, and contravenes the law it is implementing, Section 373.042, F.S.**
- **Whether the failure to consider water resource values pursuant to the State Water Resource Implementation Rule (Chapter 62- 40.473, F.A.C.) was arbitrary.**

66 – Petitioners' assertions re WRVs, algae

67 – Petitioners' view is that failure to address algal relation to flow was arbitrary

68 – Knight on flow and algae

69 to 71 – Anastasiou on other factors affecting algal distribution. Algae and velocity are related but relationship is unclear. It's too early to establish that relationship.

74 - The preponderance of the evidence established that the existing information regarding the relationship between algal accumulation and flow velocity is not sufficient to enable the District to incorporate any such criteria into the development of an MFL. They weren't irrational.

75 – Peer review report notes link between algae and velocity but panel seemed satisfied with how District handled this.

**Pre-Hearing Stip Issues:**

**Whether the failure to address the unexplained decrease in flow that has been occurring since the year 2000 before the adoption of this Proposed Rule is arbitrary.**

78 - Petitioners contend that the District's failure to address the RRS low flow between 2000-2015 demonstrates limitations with its reliance on the NDM and is, therefore, arbitrary.

80, 81 - Evidence is persuasive that groundwater withdrawals were not the cause of this low flow, as the District has not observed a decrease in the monitoring well levels, which have remained relatively flat or have risen slightly during this period. Mr. Basso speculated that this reduction could be the result of aquatic vegetation and invasive Hydrilla damming the RRS.

**Pre-Hearing Stip Issues:**

- **Whether the failure to cap current levels of withdrawal in the springshed until water quality impacts related to flow are adequately addressed in the Rainbow River System, an Outstanding Florida Water in which no water quality degradation is to occur, is arbitrary.**
- **Whether the failure to cap current levels of withdrawal in the springshed until water quality related to flow are adequately addressed in the Rainbow River System is arbitrary.**

85, 86 - The anti-degradation policy applicable to OFWs does not apply to MFL development. The MFL would not negatively affect water quality in the RRS or impair its designated use.

**Pre-Hearing Stip Issues:**

- **Whether Rule 40D-8.041(22), F.A.C., is vague and vests unbridled discretion in the District regarding the amount of flow in the Rainbow River System that can be reduced due to withdrawals and still be in compliance with the Minimum Flow.**

87, 88 - Petitioners contend that it is not clear how SWFWMD intends to define "minimum flow" in the Proposed Rule, particularly concerning the time frame and period of record for critical flow terms. A single baseline flow value is insufficient.

89 – Rule development with NDM was rational.

91, 92 – Causation analysis in cases where minimum flow projected to be broached. The Rule provides sufficient detail to ascertain how the District defines minimum flow, and how it will assess whether the minimum flow for the Rainbow River System is being met.

**CONCLUSIONS OF LAW**

104, 105, 113 – Individual petitioners have standing

110, 111, 113 – RRC has standing

118 – Definition of "invalid exercise of delegated legislative authority"

**Issues of Law For Disposition**

**A. Whether Rule 40D-8.041(22), F.A.C., is an invalid exercise of delegated legislative authority pursuant to Section 120.52(8)(c), (d), and (e), F.S.**

120 - The validity of a proposed rule does not turn on whether it represents the best means to accomplish the agency's purposes, but rather, whether it is based on facts, logic, and reason.

121 - NDM was the best information available to develop the Rule and was not arbitrary.

122 – 1965-2015 POR was not arbitrary

123 – Foregoing analysis of algal accumulation was not arbitrary

124 – Foregoing an analysis of nutrient pollution was not arbitrary

125 – District’s failure to consider water resource values was not arbitrary.

126 – Foregoing further analysis of flow reductions since 2000 was not arbitrary

127 – Foregoing capping withdrawals not arbitrary

129 – Summary statement. SWFWMD used the best available science in calculating the MFL. It conducted extensive scientific studies, hosted numerous workshops, responded to valid public comments, had its efforts positively peer-reviewed, and incorporated these efforts in drafting of the Rule supports the conclusion that SWFWMD did not act despotically or irrationally.

**B. Whether Rule 40D-8.041(22), F.A.C., is vague and vests unbridled discretion in the District.**

134 - District’s establishment of the proposed minimum flow in the Proposed Rule did not modify, contravene, or enlarge the provisions of section 373.042(1)(a).

136 - Petitioners contend that rule 40D-8.041(22)(c)4 and 5 contravene section 373.0421(2) because these subsections do not specifically provide, consistent with the requirements of section 373.0421(2), that if the existing flow falls below, or is projected to fall below the MFL, the District shall expeditiously adopt a recovery or prevention strategy.

138 – District claims that a causation analysis makes sense.

139, 140 – But the statutory language mandates an immediate recovery strategy, not further analysis.

141, 142 – Rule is valid except for the causation analysis

Page 64, footnote 3 – Gross and Knight accepted as experts

Page 65, footnote 8 – Peer review panel found 15% threshold for significant harm unproven

Page 66, footnote 13 - In *City of Sanibel v. SFWMD*, DOAH Case No. 18-5114RP (Fla. DOAH March 8, 2019), ALJ Ffolkes found that a proposed rule challenge is not the proper forum to determine whether a proposed rule is consistent with the Water Resource Implementation Rule, and that such a determination is within the exclusive jurisdiction of DEP pursuant to section 373.114(2). The undersigned agrees with this finding.

Page 66, footnote 16 – Denies District’s motion to dismiss for lack of standing

Page 69 – Right to judicial review

**Arguments in Petitioner’s PFO Which Were Ignored  
In Judge Telfer’s 1/31/20 Final Order on the Rainbow MFL  
(# refer to paragraphs from Petitioner’s PFO)**

16 [Petitioners] - Reviewers had a number of critiques and cautions [re NDM5], including: a large proportion of water comes out of the springs from unidentified sources; the model’s failure to use a parameter-estimating tool (PEST); there is calibration in the model to precise flows at certain springs but not to groundwater levels; there are large errors in the model domain for water levels; and a failure to quantify model prediction errors and uncertainty.

16 [Telfer] – Judge acknowledged that petitioners had concerns but didn’t cite them specifically and didn’t address the substance of them at all. For example, the Judge never mentioned PEST.

18, 19 [Petitioners] – Cite problems with applying NDM to a springshed.

18, 19 [Telfer] Doesn’t mention this concern but in his paragraph 53 quotes Basso re value of a regional model for assessing cumulative effects.

20, 21, 121 [Petitioners] The average error between the model simulation estimating the USGS Rainbow Springs well levels and the actual observed level at the Rainbow Springs well is four feet, with individual errors up to seven feet or more.

20, 21, 121 [Telfer] Judge ignored this point.

22, 46, 126 [Petitioners] There were no error bars or probability estimates for model estimates

22, 46, 126 [Telfer] Judge ignored this point.

25, 125 [Petitioners] Knight’s model has a better  $R^2$  value than NDM

25, 125 [Telfer] Judge ignored this point

26 [Petitioners] RRS spring flows for a given amount of annual rainfall have fallen significantly over the past 20 years.

26 [Telfer] Judge ignored this point.

28 to 31 [Petitioners] Knight did multiple tests, all of which confirmed pumping impacts over 10%. Gross’s analysis confirmed Knight’s estimates.

28 to 31 [Telfer] Judge ignored this point.

34 [Petitioners] Quote from MFL report that low rainfall conditions alone don’t explain the last 15 years of low flows.

34 [Telfer} Judge ignored this point.

35 to 41, 47, 136 [Petitioners] The District did no analysis whatsoever to link rainfall data with flow reductions over the past 20 years. Their explanation for a “magnification” of flow reductions from small changes in rain is not supported by the evidence and Basso even conceded this point on the stand.

35 to 41, 47, 136 [Telfer] The Judge ignored this point and accepted in full the District’s contention that rainfall changes have been responsible for lowered flows. *[NOTE: This is a terrible oversight by the judge, since the bogus link between rainfall and reduced flow is the heart of the District’s argument.]*

42 [Petitioners] Pumping impacts were not zero in 1965, and assuming that there were leads to a lower MFL

42 [Telfer] Judge agrees with the District that it made sense to set pumping at zero in 1965.

43 to 45, 122, 123 [Petitioners] The period of record should have been longer, which would have resulted in a higher MFL.

43 to 45, 122, 123 [Telfer] Judge says both POR arguments are reasonable but the District didn't act irrationally in selecting their POR.

54, 130 to 132 [Petitioners] Data were available to link velocity, flow, and algae.

54, 130 to 132 [Telfer] Judge agrees with the District that there were insufficient data to link velocity and algae

56 to 63, 133 to 135 [Petitioners] The rule is vague.

56 to 63, 133 to 135 [Telfer] The Judge rules that the rule is not vague.

95 [Petitioners] The fact that algal proliferation and water quality impacts would also be issues under a challenge to an FDEP consistency review under section 373.114(2) does not preclude the Petitioners from raising these issues in a 120.56 rule challenge.

95 [Telfer] Judge did state that a proposed rule challenge is not the proper forum to determine whether a proposed rule is consistent with the Water Recourse Implementation Rule; however, he didn't express a view on whether Petitioners can raise these issues in a 120.56 rule challenge.

138 [Petitioners] The District's planned use of "causation analysis" violates the law

138 [Telfer] Judge agrees with the petitioners on this point alone.

*Notes on Judge's Rainbow Order (1-31-20)*