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Bark and Bite: The Environmental Sentencing Guidelines After Booker

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I. INTRODUCTION

The federal sentencing guidelines for environmental crimes bark loudly, calling for sentences of imprisonment for all but the most trivial of environmental offenses. Although the terms of imprisonment are not long, the prospect of even a short period of incarceration is doubtlessly capable of getting the attention of the white-collar professionals who commit environmental offenses. Research I conducted in 2004, however, indicated that the bark of the environmental guidelines was considerably worse than their bite. Judges “departed” below the applicable guidelines range in an unusually high percentage of environmental cases; barely one-third of convicted environmental defendants received prison...
sentences, and only about 40 percent of prison sentences exceeded one year in length.

Although the data contained in my 2004 study were striking at the time, ensuing developments might appropriately raise questions as to their reliability today. Most notably, the Supreme Court fundamentally restructured federal sentencing law through its 2005 decision in *United States v. Booker*, which changed the status of the federal sentencing guidelines from mandatory to advisory. Additionally, whereas the earlier study was largely based on data from the Clinton era, the Bush administration substantially modified federal charging and plea-bargaining policies, particularly with an eye toward reducing sentencing departure rates. Congress also has pressed this policy goal. Finally, eight years of Republican control of the White House undoubtedly resulted in significant changes in the ideological balance of the federal judiciary.

With such developments in mind, the time is ripe for a new assessment of environmental sentencing practices. More specifically, my goals in this Article are twofold. Part II updates the data from my earlier study, demonstrating a surprising level of continuity from the Clinton to Bush presidencies, and from pre-Booker to post-Booker periods. Simply put, despite notable institutional and legal changes, the bark of the environmental guidelines remains considerably worse than their bite. Moreover, the data indicate that much of the lenience in environmental sentencing results from judges’ beliefs that the guidelines are too harsh in many cases. Part III discusses normative implications of the bark/bite gap. In light of the overarching purposes and premises of the federal sentencing system, the data provide important support for a fundamental redesign of the environmental guidelines. Failing such a redesign by the Sentencing Commission, the courts should regard the data as providing some support for arguments by individual defendants that particular provisions of the environmental guidelines should not be applied to them.

A few caveats are in order. First, in such a politically charged area as environmental crime, I should be clear at the outset that I favor neither harsher nor

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5 *Id.* at 205.
6 *Id.* at 206.
9 See, e.g., Memorandum from Attorney General John Ashcroft to Federal Prosecutors Regarding Department Policy Concerning Charging Criminal Offenses, Disposition of Charges, and Sentencing, (Sept. 22, 2003), *reprinted in* 16 FED. SENT’G REP. 129, 132 (2003) (“The Department has a duty to ensure that the circumstances in which it will request or accede to downward departures in the future are properly circumscribed.”).
10 See, e.g., Alan Vinegrad, *The New Federal Sentencing Guidelines: The Sentencing Commission’s Response to the Feeney Amendment*, 16 FED. SENT’G REP. 98, 98 (2003) (noting the 2003 Feeney Amendment was “intended to make it more difficult for federal district judges to grant downward departures from the Guidelines and for such departures to be upheld on appeal”).
more lenient environmental sentences. Rather, my primary interest here is in an environmental sentencing system that has more consistency, transparency, and moral credibility. Second, I consider only the sentencing of individual defendants, not corporations, which (having “no soul to damn and no body to kick”\textsuperscript{11}) present quite different issues in the punishment context.\textsuperscript{12} Third, I consider only federal sentencing. State sentencing tends to be far more discretionary, with much less by way of formal or binding guidance,\textsuperscript{13} and thus raises a very different set of policy concerns. Finally, by “environmental crimes,” I mean only criminal violations of pollution control laws\textsuperscript{14}—most notably, the Clean Air Act,\textsuperscript{15} the Clean Water Act,\textsuperscript{16} and the Resource Conservation and Recovery Act.\textsuperscript{17} I do not include violations of the Endangered Species Act\textsuperscript{18} and similar statutes that are primarily intended to protect wildlife.

II. ASSESSING THE BITE OF THE ENVIRONMENTAL GUIDELINES AFTER BOOKER

This Part presents updated data on federal environmental sentencing practices, focusing particularly on the post-Clinton, post-\textit{Booker} period. The first Section presents background on the legal framework within which federal sentencing occurs. Although this background is necessary to understand the data contained in the second Section, readers who are already well-versed in the arcane law of federal sentencing may comfortably skip ahead. The second Section compares the Clinton-era data with the more recent 2004–2007 period, highlighting continuities between the periods. Long prison terms remain unusual in environmental cases, and sentences below the applicable guidelines range remain common. Finally, the third Section advances the “judicial discomfort” hypothesis: to an unusual degree

\begin{itemize}
  \item See, e.g., Frank O. Bowman, III, \textit{Drifting Down the Dnieper with Prince Potemkin: Some Skeptical Reflections About the Place of Compliance Programs in Federal Criminal Sentencing}, 39 WAKE FOREST L. REV. 671, 674 (2004) (“[Corporate] punishments, which necessarily take the form of monetary fines or legal prohibitions from engaging in certain activities, simply do not engage the emotions in the way that confinement of a human being in a cell does.”).
  \item See Joanna Shepherd, \textit{Blakely’s Silver Lining: Sentencing Guidelines, Judicial Discretion, and Crime}, 58 HASTINGS L.J. 533, 540–43 (2007) (noting only eighteen states have sentencing guidelines and discussing “substantial differences” even among those systems).
  \item For a brief summary of these laws, see O’Hear, \textit{supra} note 1, at 140–43.
\end{itemize}
in the federal sentencing system, judges are uncomfortable with the appropriateness of the sentences called for by the environmental guidelines.

A. Legal Framework for Environmental Sentencing

The federal sentencing guidelines employ a two-dimensional grid to determine sentence length.\(^{19}\) Knowing two variables, offense level and criminal history score, one can use the grid to determine the particular, narrow sentencing range that is applicable in a given case.\(^{20}\) Offense level is determined by reference to guidelines that are specific to different types of offenses.\(^{21}\) Thus, the basic pollution control crimes are currently handled by the set of three guidelines—2Q1.1, 2Q1.2, and 2Q1.3\(^{22}\)—which I refer to collectively as the “environmental guidelines.” These guidelines identify a particular “base offense level” for three different sets of environmental offenses and indicate how the offense level should be adjusted depending on the presence of one or more “specific offense characteristics” (“SOCs”).\(^{23}\)

Although regarded as “mandatory” from the date of their implementation in 1987, the federal guidelines were also interpreted to give judges a measure of case-by-case discretion in deciding whether to sentence within the applicable guidelines range.\(^{24}\) Prior to \textit{Booker}, two distinct types of “downward departure” were recognized and commonly used. First, with the government’s approval, a judge might impose a below-range sentence on the basis of a defendant’s “substantial assistance” to the government in apprehending or prosecuting another offender.\(^{25}\) Second, with or without the government’s approval, a judge might depart on the basis of mitigating circumstances that were not adequately taken into account by the Sentencing Commission in formulating the guidelines.\(^{26}\) Increasing departure rates in the 1990s prompted actions by Congress and the Bush administration to produce greater compliance with the guidelines by district court judges and line prosecutors.\(^{27}\)


\(^{20}\) \textit{See} id.

\(^{21}\) \textit{See} id. at ch. 2, introductory cmt.

\(^{22}\) \textit{See} id. §§ 2Q1.1–2Q1.3 (describing offenses related to the mishandling of hazardous materials).

\(^{23}\) \textit{See generally} O’Hear, \textit{supra} note 1, at 197–202 (discussing the environmental sentencing guidelines).

\(^{24}\) \textit{See}, \textit{e.g.}, \textit{Koon v. United States}, 518 U.S. 81, 92–100 (1996) (holding that departures from guidelines range must be reviewed by appellate courts using the abuse of discretion standard).

\(^{25}\) \textit{SENTENCING GUIDELINES MANUAL}, \textit{supra} note 19, at § 5K1.1.

\(^{26}\) \textit{Id.} § 5K2.0(a)(1)–(3).

Two years later, the Supreme Court’s decision in Booker seemed to push in the opposite direction, albeit with uncertain force. Booker held that the mandatory federal guidelines, and particularly their use of judicial fact finding for the SOCs, violated defendants’ Sixth Amendment rights to a jury trial. The most uncertain question in Booker was what the remedy should be. Instead of ordering that jury fact-finding be engrafted onto the mandatory guidelines, the Court decided that the guidelines should be made merely advisory. The Court thus excised the portion of the Sentencing Reform Act (the “Act”) that required sentencing judges to impose a guidelines sentence unless the requirements for a departure were satisfied. However, the Court left in place other provisions of the Act that required the sentencing judge to “consider” the guidelines range and that authorized appellate review of sentencing decisions. The Court, in short, created something of a hybrid system that increased judicial discretion, but that also retained key features of the mandatory guidelines regime. Left for another day was any precise demarcation of how much judicial discretion was enhanced.

After Booker, the rate of below-range sentences increased, although not dramatically. Most defendants still received within-range sentences. Indeed, most of the circuit courts of appeals adopted a “presumption of reasonableness” in favor of within-range sentences, while overturning variances with some frequency.

The Supreme Court addressed these practices in a trilogy of important decisions in 2007. First, in Rita v. United States, the Court upheld the presumption of reasonableness. Second, in Gall v. United States, the Court held that all sentences, including variances, must be reviewed using the same deferential abuse-of-discretion standard. Finally, in Kimbrough v. United States, the Court held that a variance does not necessarily require there be something factually unusual about a case. Rather, in at least some circumstances, a sentencing judge may vary because he or she disagrees with a policy choice embodied in a guideline.

29 See id. at 245.
30 Id. at 245–46.
31 Id.
33 See infra tbl.7. To reflect the change in legal standards, such sentences are now described as “variances,” not “departures.”
34 Id.
36 551 U.S. at 344.
39 Id.
While the precise import of *Gall* and *Kimbrough* is open to debate in some respects, the 2007 trilogy nonetheless clarified much regarding the post-*Booker* legal landscape. Whether the doctrinal clarification will have an impact at the district-court level remains to be seen.

B. The Updated Environmental Sentencing Data

The Section presents United States Sentencing Commission data on environmental sentencing through fiscal year 2007, the most recent year for which data are available. For purposes of interpreting the data, the reader should bear in mind that *Booker* was decided midway through Fiscal Year 2005.

Table 1 indicates the frequency of prison terms as a sentence. As in the 1996–2001 period (the subject of my earlier study), only a little more than one-third of environmental defendants received prison terms in the 2004–2007 period. In both periods, this percentage is far lower than was the norm for federal defendants generally (81.6 percent in 1996–2001 and 87.1 percent in 2004–2007). Also of note in Table 1 is a drop in the number of sentenced environmental defendants, from an average of 110.5 per year in 1996–2001 to 85 in 2004–2007.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Sentenced Environmental Defendants</th>
<th>Environmental Defendants Receiving Prison Sentence</th>
<th>Percentage of Environmental Defendants Receiving Prison Sentence</th>
<th>Percentage of All Defendants Receiving Prison Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>85</td>
<td>32</td>
<td>37.6</td>
<td>85.7</td>
</tr>
<tr>
<td>2005</td>
<td>89</td>
<td>32</td>
<td>36.0</td>
<td>87.3</td>
</tr>
<tr>
<td>2006</td>
<td>89</td>
<td>39</td>
<td>43.8</td>
<td>87.7</td>
</tr>
<tr>
<td>2007</td>
<td>77</td>
<td>23</td>
<td>29.9</td>
<td>87.5</td>
</tr>
<tr>
<td>Total</td>
<td>340</td>
<td>126</td>
<td>37.1</td>
<td>87.1</td>
</tr>
<tr>
<td>1996–2001</td>
<td>663</td>
<td>240</td>
<td>36.2</td>
<td>81.6</td>
</tr>
</tbody>
</table>

More specifically, this Section deals with cases in which the highest adjusted offense level was based on sections 2Q1.1, 2Q1.2, or 2Q1.3 of the sentencing guidelines. Sentencing Commission data are available online from the Federal Justice Statistics Resource Center (“FJSRC”) at http://fjsrc.urban.org. The data presented here were compiled from searches of the FJSRC database.

This includes split sentences with a prison component.

O’Hear, supra note 1, at 205.

See id.

The 1996–2001 data come from O’Hear, supra note 1, at 205.
Table 2 presents data on the length of prison terms for those who were sentenced to prison. The overwhelming majority (77.0 percent) received prison terms of two years or less. This is close to data from the 1995–2001 period, when 80.5 percent of imprisoned defendants received terms of two years or less. As Table 3 indicates, the sentence lengths for environmental defendants are generally far less than for other federal defendants, most of whom received terms of more than two years in both 1995–2001 and 2004–2007.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>0–1 Year (Percent)</th>
<th>1–2 Years (Percent)</th>
<th>2–3 Years (Percent)</th>
<th>3–5 Years (Percent)</th>
<th>More Than 5 Years (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>50.0</td>
<td>28.1</td>
<td>9.4</td>
<td>12.5</td>
<td>0.0</td>
</tr>
<tr>
<td>2005</td>
<td>43.8</td>
<td>28.1</td>
<td>15.6</td>
<td>3.1</td>
<td>9.4</td>
</tr>
<tr>
<td>2006</td>
<td>35.9</td>
<td>43.6</td>
<td>17.9</td>
<td>2.6</td>
<td>0.0</td>
</tr>
<tr>
<td>2007</td>
<td>43.5</td>
<td>34.8</td>
<td>21.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Average</td>
<td>42.9</td>
<td>34.1</td>
<td>15.9</td>
<td>4.8</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Table 3—Length of Prison Term for All Federal Defendants Receiving Prison Sentence

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>0–1 Year (Percent)</th>
<th>1–2 Years (Percent)</th>
<th>2–3 Years (Percent)</th>
<th>3–5 Years (Percent)</th>
<th>More Than 5 Years (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>19.7</td>
<td>21.4</td>
<td>14.2</td>
<td>13.1</td>
<td>31.5</td>
</tr>
<tr>
<td>2005</td>
<td>20.0</td>
<td>21.0</td>
<td>14.1</td>
<td>12.7</td>
<td>32.2</td>
</tr>
<tr>
<td>2006</td>
<td>18.8</td>
<td>20.7</td>
<td>14.0</td>
<td>12.8</td>
<td>33.7</td>
</tr>
<tr>
<td>2007</td>
<td>20.0</td>
<td>19.9</td>
<td>13.2</td>
<td>12.7</td>
<td>34.1</td>
</tr>
<tr>
<td>Average</td>
<td>19.6</td>
<td>20.8</td>
<td>13.9</td>
<td>12.8</td>
<td>32.9</td>
</tr>
</tbody>
</table>

45 See id. at 206.
46 The percentage in 1995–2001 was 57.2. See id. at 207.
Table 4 indicates one reason for the low sentences in environmental cases relative to other cases: environmental defendants tend to have much less serious criminal histories. The recent data are quite consistent with the 1995–2001 data.

Table 4—Criminal History of Sentenced Environmental Defendants and All Sentenced Federal Defendants

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Sentenced Environmental Defendants in Category I (Percent)</th>
<th>All Sentenced Defendants in Category I (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>87.0</td>
<td>44.4</td>
</tr>
<tr>
<td>2005</td>
<td>85.4</td>
<td>45.0</td>
</tr>
<tr>
<td>2006</td>
<td>86.5</td>
<td>45.3</td>
</tr>
<tr>
<td>2007</td>
<td>88.3</td>
<td>45.5</td>
</tr>
<tr>
<td>Average</td>
<td>86.8</td>
<td>45.0</td>
</tr>
<tr>
<td>1995–2001</td>
<td>88.3</td>
<td>54.5</td>
</tr>
</tbody>
</table>

The relatively low criminal history of environmental defendants tends to produce relatively low guidelines ranges. Even given that, judges may still think the guidelines are on the harsh side for environmental defendants. One indication of this is revealed in Table 5: more than 85 percent of environmental defendants sentenced within the guidelines range receive the very lowest possible sentence in that range. In such cases, the sentencing judge is suggesting he or she thinks the guidelines range is appropriate, but only barely so. Again, the numbers are consistent with earlier data.

Table 5—Sentencing Within Range

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Environmental Defendants Sentenced at Guideline Minimum (Percent)</th>
<th>All Defendants Sentenced at Guideline Minimum (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>84.9</td>
<td>60.0</td>
</tr>
<tr>
<td>2005</td>
<td>88.5</td>
<td>59.2</td>
</tr>
<tr>
<td>2006</td>
<td>79.4</td>
<td>58.7</td>
</tr>
<tr>
<td>2007</td>
<td>89.8</td>
<td>58.9</td>
</tr>
<tr>
<td>Average</td>
<td>85.6</td>
<td>59.2</td>
</tr>
<tr>
<td>1997–2002</td>
<td>81.5</td>
<td>60.7</td>
</tr>
</tbody>
</table>

47 Category I is the lowest possible category. See SENTENCING GUIDELINES MANUAL, supra note 19, at § 5A.
48 See O’Hear, supra note 1, at 205–07.
49 Id. at 208.
50 Id.
51 Id. at 209.
Tables 6–9 present the data on sentences outside the guidelines range.\textsuperscript{52} For 2004–2007, 50.3 percent of environmental defendants received below-range sentences, which is close to the 48.2 percent for 1995–2001,\textsuperscript{53} and considerably higher than the 32.2 percent for federal defendants overall.\textsuperscript{54} If government-sponsored departures are excluded, then 23.5 percent of environmental defendants received departures or variances, compared with 15.3 percent for federal defendants overall.\textsuperscript{55} This underscores the extent to which judges (as opposed to prosecutors) are making the determination that the environmental guidelines are too harsh in many individual cases.

**Table 6—Downward Departure Rates for Sentenced Environmental Defendants**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Substantial Assistance Departures (Percent)</th>
<th>Other Government-Sponsored Departures (Percent)</th>
<th>Judicial Departures (Percent)</th>
<th>Total Downward Departures (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>14.1</td>
<td>2.4</td>
<td>21.3</td>
<td>37.6</td>
</tr>
<tr>
<td>2005</td>
<td>32.6</td>
<td>5.6</td>
<td>14.6</td>
<td>52.8</td>
</tr>
<tr>
<td>2006</td>
<td>18.0</td>
<td>7.9</td>
<td>26.9</td>
<td>52.8</td>
</tr>
<tr>
<td>2007</td>
<td>16.9</td>
<td>9.1</td>
<td>32.4</td>
<td>58.4</td>
</tr>
<tr>
<td>Average</td>
<td>20.6</td>
<td>6.2</td>
<td>23.5</td>
<td>50.3</td>
</tr>
</tbody>
</table>

**Table 7—Downward Departure Rates for All Sentenced Federal Defendants**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Substantial Assistance Departures (Percent)</th>
<th>Other Government-Sponsored Departures (Percent)</th>
<th>Judicial Departures (Percent)</th>
<th>Total Downward Departures (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>14.1</td>
<td>3.0</td>
<td>15.2</td>
<td>32.3</td>
</tr>
<tr>
<td>2005</td>
<td>13.9</td>
<td>2.5</td>
<td>16.5</td>
<td>32.9</td>
</tr>
<tr>
<td>2006</td>
<td>14.0</td>
<td>2.7</td>
<td>18.8</td>
<td>35.5</td>
</tr>
<tr>
<td>2007</td>
<td>13.8</td>
<td>3.6</td>
<td>18.7</td>
<td>36.1</td>
</tr>
<tr>
<td>Average</td>
<td>14.0</td>
<td>2.9</td>
<td>15.3</td>
<td>32.2</td>
</tr>
</tbody>
</table>

\textsuperscript{52} The term “departure” is used here, although “variance” would be the preferred term for the latter portion of the covered period.

\textsuperscript{53} See infra tbl.6; O’Hear, supra note 1, at 210 tbl.6.

\textsuperscript{54} See infra tbl.7.

\textsuperscript{55} See infra tbls.6 & 7. I refer to this rate as the “judicial departure” rate in the tables.
Table 8—Sentences of Environmental Defendants in Relation to Guideline Range

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Below Guideline Range (Percent)</th>
<th>Within Guideline Range (Percent)</th>
<th>Above Guideline Range (Percent)</th>
<th>Data Missing/Unknown (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>37.6</td>
<td>54.1</td>
<td>0.0</td>
<td>8.2</td>
</tr>
<tr>
<td>2005</td>
<td>52.8</td>
<td>40.4</td>
<td>0.0</td>
<td>6.7</td>
</tr>
<tr>
<td>2006</td>
<td>52.8</td>
<td>43.8</td>
<td>0.0</td>
<td>3.3</td>
</tr>
<tr>
<td>2007</td>
<td>58.4</td>
<td>39.0</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Average</td>
<td>50.3</td>
<td>44.4</td>
<td>0.0</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Table 9—Sentences of All Federal Defendants in Relation to Guideline Range

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Below Guideline Range (Percent)</th>
<th>Within Guideline Range (Percent)</th>
<th>Above Guideline Range (Percent)</th>
<th>Data Missing/Unknown (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>25.2</td>
<td>66.9</td>
<td>0.7</td>
<td>7.1</td>
</tr>
<tr>
<td>2005</td>
<td>32.9</td>
<td>60.8</td>
<td>1.3</td>
<td>5.0</td>
</tr>
<tr>
<td>2006</td>
<td>35.5</td>
<td>59.7</td>
<td>1.6</td>
<td>3.3</td>
</tr>
<tr>
<td>2007</td>
<td>36.1</td>
<td>58.3</td>
<td>1.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Average</td>
<td>32.5</td>
<td>61.4</td>
<td>1.3</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Figure 1 presents the overall data on below-range sentences since 1995. Although there is remarkable year-to-year variation in the environmental sentencing data (no doubt reflecting the relatively small number of environmental cases), a regular pattern of peaks and valleys is nonetheless apparent. In environmental cases, the below-range numbers have stayed consistently within the 40 to 60 percent band, under both Clinton and Bush, and pre- and post-Booker.

Given the track record of volatility in the data, it is too early to say whether the post-Booker highs represent a long-term plateau or just another short-term peak.56

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56 Differences between the immediate pre- and post-Booker periods are not statistically significant even at the 90 percent confidence level.
What seems much more certain is that environmental defendants are far more likely to get a below-range sentence than federal defendants generally. Over the 1995–2007 period—thirteen consecutive years—the below-range number for environmental defendants exceeds the general number, often by 20 percentage points or more. Indeed, the lowest single-year number for environmental defendants (in 2004) is still higher than the highest single-year number for all defendants (in 2007). The environmental disparity seems not to have been much affected either by Booker or the changeover in presidential administrations.

Nor does this disparity seem to be a generalized phenomenon of white-collar sentencing. Figure 2, for instance, shows consistently higher departure rates for environmental defendants than for those sentenced under the basic guideline for economic crimes. Indeed, contrary to the common perception of preferential treatment for white-collar offenders, a comparison of Figures 1 and 2 shows consistently lower percentages of below-range sentences for the theft/fraud defendants than for federal defendants generally.

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57 Over the 1995–2007 period, the differences are statistically significant at better than a 99 percent confidence level.
58 Section 2B1.1 covers theft, fraud, embezzlement, and the like. SENTENCING GUIDELINES MANUAL, supra note 19, at § 2B1.1.
C. The Judicial Discomfort Hypothesis

Why do environmental defendants benefit from such a high rate of below-range sentences? There are doubtless many causes, and a systematic, quantitative exploration of the question lies beyond the scope of this Article. This Section focuses on just one possible explanation: that judges are uncomfortable with the harshness of the guidelines in an unusually high proportion of environmental cases. To put the matter differently, I hope to make the case that below-range sentences in environmental cases result not only from the exercise of prosecutorial discretion in support of law enforcement priorities (e.g., rewarding substantial assistance), but also in large measure from the exercise of judicial discretion in support of judges’ views of what is a just sentence.

Three categories of data reflect the judicial discomfort. First, and most important, is the judicial departure rate of 23.5 percent in environmental cases over the 2004–2007 period, more than 8 percentage points higher than the overall judicial departure rate.\textsuperscript{59} Although judicial departures in about a quarter of environmental cases may not at first blush seem indicative of high levels of judicial discomfort, the data need to be assessed in context. High rates of government-sponsored departures in environmental cases (26.8 percent\textsuperscript{60}) mean that judges often have a readily available alternative to the guidelines range without needing to use the judicial departure mechanism. If cases with

\textsuperscript{59} See supra tbl.6.

\textsuperscript{60} The 26.8 percentage comes from combining the average “Substantial Assistance Departures” and “Other Government-Sponsored Departures” from Table 6.
government-sponsored departures are excluded, then the judicial departure rate increases to 32.1 percent. Additionally, both pre- and post-Booker, judges are apt to place a thumb on the scales in favor of within-range sentences. This may be for reasons both principled (e.g., a commitment to the ideal of sentencing uniformity that is embodied in the guidelines system) and expedient (e.g., a desire to avoid the heightened reversal risks associated with below-range sentences even post-Booker). Thus, whatever the number of judicial departures, there may be a sizeable number of additional cases in which the judge imposed the guidelines sentence despite real misgivings as to whether it was truly proportionate to the seriousness of the offense.

Second, the government-sponsored departure rate is also suggestive of judicial discomfort, although admittedly less clearly so. Even when the government supports a defendant’s request for a below-range sentence, the judge is still free to reject the request. To be sure, the request may be granted for reasons that have nothing to do with the merits of the environmental guidelines, e.g., the judge’s desire to encourage and reward substantial assistance. Yet a judge with a high level of confidence in the justness of a guidelines sentence will be less open to going below that sentence to further other policy objectives. Conversely, a judge who is already skeptical of the guidelines sentence will need correspondingly less persuasion. For that reason, it seems fair to view the high rate of government-sponsored departures (26.8 percent in environmental cases, as opposed to 16.9 percent overall) as also reflecting an unusually high degree of judicial skepticism of the environmental guidelines.

Third, there is the high rate of sentences at the very bottom of the guidelines range (85.6 percent in environmental cases, as against 59.2 percent overall). In these cases, the judge suggests that the guidelines range only just barely overlaps with the range of what she would consider a just sentence—or that she is actually imposing (for reasons good or bad) a guidelines sentence that she feels is too harsh. Either way, these bottom-of-the-range sentences seem to reflect a widespread judicial view that the guidelines are not squarely hitting the mark when it comes to proportionate sentencing in environmental cases.

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61 See supra tbl.6.
63 That the below-range sentences really are, in large measure, about proportionality issues is supported by the Commission’s compilation of reasons for departures in the pre-Booker cases: putting substantial assistance to one side, the most frequently mentioned reasons for departure in environmental cases were related to culpability issues like harm and state of mind. O’Hear, supra note 1, at 210–12.
64 See supra tbls.6 & 7.
65 See supra tbl.5.
III. NORMATIVE IMPLICATIONS OF THE BITE/BARK GAP

Should we be concerned that the environmental guidelines have a bark that is worse than their bite? In this Part, I argue that Congress or the Sentencing Commission should take action to close the gap between bite and bark. Separately, in light of Rita and Kimbrough, I also consider the implications of the bite/bark data for the court system.

A. Implications for Congress and the Sentencing Commission

If the gap between bark and bite were viewed as an important issue, Congress and the Sentencing Commission have tools available to address the problem. In particular, the guidelines might be made more binding (i.e., the bite brought into greater conformity with the bark) or the content of the guidelines might be modified (i.e., the bark brought into greater conformity with the bite). Before considering these responses, however, this Section will first address the option of doing nothing.

1. Do Nothing

One might argue that the guidelines’ bark should be worse than their bite. The bark may be adequate to produce the desired deterrence effects, while the modest bite minimizes the various social costs associated with incarceration. There is something to be said for this position as a matter of abstract policy, but it plainly runs counter to the basic premises of the federal sentencing system.

Through its adoption of the Sentencing Reform Act of 1984, which replaced broad discretion with sentencing guidelines, Congress endorsed a deterrence approach that emphasizes certainty and predictability in punishment. More fundamentally, Congress recognized that unwarranted disparities in sentencing, such as treating similarly situated defendants differently, is not only unfair, but also undermines the legitimacy of the criminal justice system.

66 Such costs range from prison administration expenses to the harm suffered by children when a parent is removed from the home.

67 See 28 U.S.C. § 994(f) (2006) (requiring Sentencing Commission to pay “particular attention” to ensuring “certainty . . . in sentencing”); S. REP. No. 98-225, at 49–50 (1985), as reprinted in 1984 U.S.C.C.A.N. 3182, 3232–33 (“[T]he existing Federal system lacks the sureness that criminal justice must provide if it is to retain the confidence of American society and if it is to be an effective deterrent against crime.”); O’Hear, supra note 27, at 769–70 (quoting Senator Kennedy, chief sponsor of legislation that became Sentencing Reform Act, on importance of “certainty of punishment” as “important prerequisite in any crime-fighting program”).

Viewed in that light, the basic problems with the do-nothing approach are in the areas of transparency, predictability, and uniformity. Many environmental defendants receive variances in sentencing, but close to half do not. Under *Rita*, the latter defendants have little ability to challenge their sentences on appeal and ensure that variances are being distributed in a consistent, principled fashion.\(^{69}\) Moreover, among the defendants who do get variances, *Gall* suggests there is little basis for the appellate courts to ensure consistency in the magnitude of variances.\(^{70}\) In short, if we care about the reality or perception of unwarranted disparities in sentencing, we ought to feel troubled about our current environmental sentencing arrangements, in which variances are commonplace.

2. *Make the Guidelines More Binding*

To address disparity concerns, Congress might make the environmental guidelines mandatory. This could be accomplished, notwithstanding *Booker*, by providing jury fact-finding of SOCs, or by restructuring the guidelines such that the existing sentencing ranges are converted into mandatory minimum sentences.\(^{71}\) Of course, it would probably not be sufficient to restore the pre-*Booker* level of “bindingness”; recall that it is not clear that *Booker* even increased the rate of below-guidelines sentences relative to pre-*Booker* trends. But to make the environmental guidelines more mandatory even than they were pre-*Booker* would take us into uncharted and risky waters. Surely, there must be some discretion preserved for sentencing judges to consider truly unusual mitigating factors that have not been addressed in the guidelines range.\(^{72}\)

This points to a deeper problem with making the environmental guidelines more binding: they do a poor job of distinguishing between high- and low-culpability defendants. I have critiqued the environmental guidelines at length

\(^{69}\) See *Rita* v. United States, 551 U.S. 338, 344 (2007) (upholding presumption of reasonableness in favor of within-range sentences); *see also* id. at 2468 (“[W]hen a judge decides simply to apply the Guidelines to a particular case, doing so will not necessarily require lengthy explanation.”).

\(^{70}\) See *Gall* v. United States, 552 U.S. 38, 49 (2007) (holding that even sentences “significantly outside the Guidelines range” must be reviewed “under a deferential abuse-of-discretion standard”).

\(^{71}\) By the latter suggestion, I have in mind the proposal for so-called “topless” guidelines. *See generally* The Constitution Project Sentencing Initiative, *Recommendations for Federal Criminal Sentencing in a Post-Booker World*, 18 FED. SENT’G REP. 310, 311 (2006) (describing the topless guideline proposal as one that “would have removed the tops of existing sentencing guidelines ranges in order to comply with the apparent requirements of *Blakely v. Washington*.”).

\(^{72}\) The jury fact-finding option would also have drawbacks in terms of procedural cumbersomeness and prosecutorial control over which SOCs would be presented to the jury.
elsewhere. Briefly, the guidelines do not make important distinctions based on state of mind, while they assess harm and dangerousness in such a scattershot fashion that essentially harmless offenses can result in more serious sentences than life-threatening ones. Given these problems, it is hard not to think that a high variance rate in environmental cases may be warranted from a proportionality standpoint. Thus, even taking into account the prospect of greater uniformity, it is hard to summon much enthusiasm for any effort to make the existing guidelines more binding: the cure could be worse than the disease.

3. Revise the Guidelines

I proposed a comprehensive revision of the environmental guidelines in my 2004 study. The proposed new guideline, which is reprinted as Appendix A to this Article, offers a more coherent and systematic approach to assessing culpability. The new guideline would likely conform more closely to the moral intuitions of judges, thereby lessening the need for a high variance rate in our current relatively discretionary system and helping to close the bark/bite gap. And if the system became more mandatory, the proposed guidelines would help judges to avoid the excessive sentences that are sometimes called for by the existing guidelines in low-culpability cases.

It would be redundant to restate my case for the proposed revisions at length, but there is a new objection that must be addressed now that could not have been made in 2004. Specifically, one might argue, there is no point in improving the guidelines because Booker has endowed judges with broad discretion to vary from them whenever the guidelines produce an unjust result. Put differently, the judges...
This objection, however, misses both the intrinsic value of low variance rates and the continued “gravitational pull” of the guidelines in the post-Booker/post-Rita sentencing process. First, even if the guidelines have no substantive effect, it would still be helpful for the guidelines to be modified so as to bring them into closer alignment with what judges are actually doing. Doing so would advance the congressional goal of predictability in sentencing.\textsuperscript{77} Even guidelines that are, in effect, merely descriptive of typical practices still serve the useful purpose of providing everyone fair notice of the punishment that is likely to result from any given criminal conduct. Moreover, legitimizing goals may also be served by the perception—even if inaccurate—that the guidelines are constraining judicial discretion and reducing the risks of arbitrary outcomes.\textsuperscript{78} In that sense, too, there may be intrinsic value to a system in which variance rates are low.

Second, despite Booker, it is not plausible that the guidelines are substantively irrelevant in the determination of sentences. To appreciate why and how the guidelines still matter in a post-Booker world, it may be helpful to distinguish among three types of cases in a simplified model of judicial decision making: no-deference cases, total-deference cases, and limited-deference cases. In no-deference cases, as a result of some combination of judicial temperament and other factors, the judge will have strong feelings about the proper sentence and will reach the desired outcome regardless of the guidelines.\textsuperscript{79}

At the opposite extreme, in total-deference cases, the judge will simply follow the guidelines with little serious consideration of alternatives. Although the judge is endowed with expanded discretion post-Booker, the judge is still required to calculate the guidelines range,\textsuperscript{80} and, having invested the effort in doing so, the judge will naturally be inclined to pay some attention to the result.\textsuperscript{81} Moreover, the judge will realize that following the guidelines remains the path of least resistance. Under Rita, the guidelines sentence will usually be affirmed with little or no need to create an additional record beyond the guidelines calculation itself.\textsuperscript{81} In contrast, the below-guidelines sentence will most likely have to be justified in a more

\textsuperscript{77} See O’Hear, supra note 27, at 797, 800 (discussing importance of predictability in the Sentencing Reform Act and Feeney Amendment).


\textsuperscript{79} See Gall v. United States, 552 U.S. 38, 49 (2007) ("[A] district court should begin all sentencing proceedings by correctly calculating the applicable Guidelines range.” (citation omitted)).


extensive fashion and, even at that, faces a substantial risk of reversal on appeal. Given these realities of post-
Booker sentencing, it is easy to see why a judge would be inclined just to defer to the guidelines, particularly if the judge otherwise lacks strong feelings about the case.

In the middle are the limited-deference cases: the guidelines will get some meaningful weight in the sentencing calculus, but there is no ex ante commitment just to follow the guidelines and be done with it. Variance arguments will get due consideration—although, if there is a variance, the judge is not likely to move far from the guidelines range. It is, of course, self-evidently worthwhile to get the guidelines right for purposes of the total-deference cases—that is, if there is any substantial number of such cases. It is not possible to determine with any precision how common such cases are, although the features of post-
Booker sentencing discussed above provide good reason to believe they are not infrequent. Moreover, a number of the published post-
Booker cases, including 
Rita itself, seem to reflect a very high level of judicial deference to the guidelines.

Even if one believes the number of total-deference cases to be small, it would still be worthwhile to get the guidelines right for the limited-deference cases—and this category is surely not small. With the special weight given to the guidelines in post-
Booker sentencing processes, it is hard to believe that judges are giving the guidelines no substantive deference at all. And, to the extent the guidelines are given meaningful weight—which might manifest itself as a de facto presumption against variance or as a disinclination to vary far from the guidelines range—we should want them to reflect a coherent, principled approach to punishment.

4. Summary

We should be concerned about the bite/bark gap in environmental sentencing in light of the transparency and uniformity goals of the federal sentencing system. It makes little sense, however, to address this problem in a way that would push judges to adhere more closely to guidelines that do not appropriately distinguish between high- and low-culpability defendants as there is no good reason to favor uniformity over proportionality. Revised environmental guidelines with a more coherent approach to culpability can advance both objectives: high-deference

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82 See Gall, 552 U.S. at 50 (“If [the sentencing judge] decides that an outside-Guidelines sentence is warranted, he must consider the extent of the deviation and ensure that the justification is sufficiently compelling to support the degree of the variance.”); Brief for the New York Council of Defense Lawyers, supra note 35, at 5–6 (discussing data on sentencing appeals post-
Booker).

83 See United States v. Cunningham, 429 F.3d 673, 679 (7th Cir. 2005) (noting “the temptation to a busy judge to impose the guidelines sentence and be done with it”).

84 See O’Hear, supra note 80, at 466–67 (noting how little attention district court judge seemed to pay to variance argument in 
Rita).
judges will more reliably impose proportionate sentences, while low-deference judges will more reliably impose uniform sentences.\textsuperscript{85}

\textit{B. Implications for the Courts}

If the Sentencing Commission does not act to reform the environmental guidelines, individual sentencing judges can and should use their enhanced post-

\textit{Booker} discretion to reject disproportionate guidelines sentences, while appellate courts should also be especially wary of sentencing judges who simply follow the environmental guidelines without regard to plausible variance arguments. To be sure, even in the pre-

\textit{Booker} period, sentencing judges could (and with surprising frequency did) depart in environmental cases to avoid troubling results. But two features of the pre-

\textit{Booker} doctrinal landscape made it difficult to imagine the courts systematically playing an effective role as guarantors of proportionality. First, absent prosecutorial support, sentencing judges were prohibited from departing from the guidelines except on the basis of unusual case-specific facts that had not been adequately considered by the Sentencing Commission in formulating the environmental guidelines.\textsuperscript{86} Thus, judges could not depart in cases that appeared to be routine, or factually typical. Second, appellate courts could not review a sentencing judge’s decision not to depart from the guidelines.\textsuperscript{87}

Both of these critical features of the pre-

\textit{Booker} landscape have been eliminated. First, in \textit{Kimbrough}, the Supreme Court indicated that a judge may impose a below-guidelines sentence even in a typical crack cocaine case on the basis of the judge’s disagreement with the harshness of the crack guidelines.\textsuperscript{88} It is true, of course, that the crack guidelines have a unique history, and some lower courts have accordingly suggested that \textit{Kimbrough} may be limited to that, or a very similar, context.\textsuperscript{89} In particular, the \textit{Kimbrough} Court itself emphasized, “The crack cocaine guidelines . . . do not exemplify the [Sentencing] Commission’s exercise of its characteristic institutional role. In formulating Guidelines ranges for

\textsuperscript{85} To be sure, my emphasis on proportionality tends to exclude the sort of attention-getting extreme sentence that might be thought to have particular value in deterring environmental violations. As I have argued elsewhere, however, the deterrence effects of harsh punishment may be much less important in securing compliance with environmental laws than the overall moral credibility of the regulatory system, which is weakened, not strengthened, by disproportionate sentences. O’Hear, supra note 1, at 253–55.

\textsuperscript{86} 18 U.S.C. § 3553(b) (2006).

\textsuperscript{87} See, e.g., United States v. Portela, 167 F.3d 687, 708 (1st Cir. 1999); United States v. Caban, 173 F.3d 89, 92 (2d Cir. 1999).

\textsuperscript{88} Kimbrough v. United States, 552 U.S. 85, 101–02 (2007).

\textsuperscript{89} See, e.g., United States v. Vega-Castillo, 540 F.3d 1235, 1239 (11th Cir. 2008) (“\textit{Kimbrough} dealt only with certain Guidelines—those that, like the crack cocaine Guidelines, ‘do not exemplify the [Sentencing] Commission’s exercise of its characteristic institutional role.’” (quoting \textit{Kimbrough}, 552 U.S. at 101–02)).
crack cocaine offenses . . . the [Sentencing] Commission . . . did not take account of ‘empirical data and national experience.’”

Yet even if the *Kimbrough* power to reject a guideline in routine cases is limited to guidelines in which the Sentencing Commission has not exercised its “characteristic institutional role,” the environmental guidelines would still qualify. As the Court itself suggested in *Kimbrough*, the Sentencing Commission’s characteristic role is to base guidelines on empirical analysis of actual sentencing practices. The environmental guidelines, however, were not based on actual sentencing practices, and they continue to be out of step with what judges are actually doing in environmental cases. The Sentencing Commission’s failure to play its characteristic role thus qualifies environmental defendants for *Kimbrough* variances even on a cautious reading of *Kimbrough*.

Second, as *Rita* affirmed, a sentencing judge’s post-*Booker* decision not to vary is now subject to appellate review for “reasonableness.” To be sure, as *Rita* also affirmed, the appellate court may accord a presumption of reasonableness to a within-range sentence. The presumption, however, is a rebuttable one. Moreover, there are good reasons to treat the presumption as a particularly weak one in the environmental sentencing context. The *Rita* Court found the presumption an appropriate way to recognize that the guidelines embody a “rough approximation” of the statutory purposes of sentencing. Thus, the Court once again emphasized the empirical foundation of the guidelines, as well as the evolutionary process by which the Sentencing Commission may amend the guidelines based on actual sentencing practices. As to guidelines (like the environmental guidelines) that do not, in fact, emerge from the Sentencing Commission playing this “characteristic role,” the justification for the presumption

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90 *Kimbrough*, 552 U.S. at 101–02 (quoting United States v. Pruitt, 502 F.3d 1154, 1171 (10th Cir. 2007)).
94 *Id.* at 347.
95 *Id.* at 336. Moreover, *Rita* only permits, and does not require, appellate courts to employ the presumption. See *id.* at 340 (“The most important question before us is whether the law permits the courts of appeals to use this presumption. We hold that it does.” (emphasis added)).
96 *Id.* at 349–51.
97 *Id.* at 349.
of reasonableness is particularly attenuated, and the presumption should be given little weight in the appellate review process.

Thus, the new post-

Booker

landscape provides a more favorable doctrinal framework for both district court and appellate court judges to enforce basic principles of proportionality in sentencing, even where the guidelines call for disproportionate outcomes. And if judges continue to take advantage of this framework with increasing frequency in environmental cases, perhaps the Sentencing Commission will finally feel obliged to act pursuant to the evolutionary model extolled by

Rita

and revise the environmental guidelines in light of actual practices.

To be sure, if the courts follow the path I suggest here, there may be an increase in the variance rate in environmental cases, which might be seen as sacrificing uniformity for proportionality. On the other hand, when variance rates are already extraordinarily high, there seems little to lose on the uniformity front. Indeed, when variances are granted in more than half of environmental cases (as has happened every year so far since

Booker

), it may be that uniformity interests are advanced, not undermined, by a further increase in the variance rates.

IV. CONCLUSION

The gap between the bark and the bite of the environmental sentencing guidelines remains high post-Clinton presidency and post-

Booker

. I suspect that some environmentalists will see in this data a reason to support mandatory minimums or other measures that will better ensure substantial prison sentences for environmental offenders. I see the problem, however, not necessarily as one of inadequate severity, but as one of inadequate transparency and uniformity. Mandatory minimums may address these concerns, but likely at too great a cost in proportionality. Long prison terms for violations that are accidental or minimally harmful diminish the moral credibility of the regulatory system. It would be preferable to redesign the environmental guidelines so that they better assure lenient sentences for low-culpability violators. Redesigned guidelines along these lines would have more credibility both with judges (who might then be more inclined to defer to the guidelines when they do call for harsh sentences) and with the regulated community (which might then view the environmental regulatory regime as fairer and more legitimate).
APPENDIX A

Proposal for Revised Environmental Guideline to Replace Sections 2Q1.1, 1.2, & 1.3

§2Q1.1 Mishandling of Hazardous or Toxic Substances, Pesticides, and Other Regulated Environmental Pollutants; Recordkeeping, Tampering, and Falsification

(a) Base Offense Level: 6

(b) Specific Offense Characteristics

<table>
<thead>
<tr>
<th>Imminent Danger of Death or Serious Bodily Harm</th>
<th>Defendant’s Purpose Was to Cause Threatened Type of Harm</th>
<th>Defendant Knew Harm Was Practically Certain to Result</th>
<th>Defendant Recklessly Disregarded Risk of Harm</th>
<th>Defendant Negligently Disregarded Risk of Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imminent Danger of Large-Scale Environmental Harm</td>
<td>Increase by 22 levels</td>
<td>Increase by 18 levels</td>
<td>Increase by 14 levels</td>
<td>Increase by 8 levels</td>
</tr>
<tr>
<td>Imminent Danger of Localized Environmental Harm</td>
<td>Increase by 18 levels</td>
<td>Increase by 14 levels</td>
<td>Increase by 10 levels</td>
<td>Increase by 4 levels</td>
</tr>
<tr>
<td>Lesser Degree of Danger of Environmental Harm</td>
<td>Increase by 14 levels</td>
<td>Increase by 10 levels</td>
<td>Increase by 6 levels</td>
<td>No Increase</td>
</tr>
<tr>
<td>Danger of Regulatory Harm Only</td>
<td>Increase by 12 levels</td>
<td>Increase by 8 levels</td>
<td>Increase by 4 levels</td>
<td>Decrease by 2 levels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increase by 4 levels</td>
<td>No Increase</td>
<td>Decrease by 4 levels</td>
</tr>
</tbody>
</table>
Application Notes:

1. The purpose of this section is to establish sentences for environmental offenders that are proportionate to their culpability, based chiefly on three considerations: the magnitude of the harm threatened by the offense, the likelihood that the harm would occur, and the offender’s intent with respect to the threatened harm. These considerations are reflected in the two-dimensional matrix for specific offense characteristics. The vertical axis distinguishes among offenders based on the severity of the harm threatened and the likelihood of that harm occurring. These should be measured according to reasonable expectations as to the consequences of the offense, i.e., what a reasonable person with the defendant’s knowledge at the time of the offense would expect would happen as a result of the offense. The horizontal axis distinguishes among offenders based on their state of mind as to the threatened harms.

2. “Environmental harm” means any non-trivial injury caused by the introduction of hazardous substances or other pollutants into the environment. The term includes such categories of harm as physical injury and emotional distress suffered by human beings, diminution in property values, environmental remediation expenses, disruptions to business or other social activities, permanent damage to the integrity of an ecosystem, and death of plants and animals.

3. “Large-scale environmental harm” means environmental harm on a scale that might fairly be thought of as “disastrous.” In determining whether threatened harms are on this scale, the following considerations may be relevant: the geographical scale of the harm, the duration of the harm, the irreparability of the harm, the possibility of physical injury to human beings, the number of people affected, the number of plants and animals affected, and the economic value of the harm. Examples of large-scale environmental harm include: irreparable destruction of hundreds of acres of ecologically rich wetlands; exposure of dozens of people to a highly toxic substance; evacuation of an entire town for more than a month; and the closure of a popular beach for a year, with catastrophic financial losses for local businesses.

4. “Localized environmental harm” means substantial environmental harm that does not reach the level of “large-scale environmental harm.” Examples of localized environmental harm include soil and groundwater contamination that can be contained and remediated so as to prevent significant human health risks; death of a small number of animals, without long-term threats to the viability of a population or an ecosystem; and discharges of air or water pollution that may contribute to violations of air or water quality standards.

5. “Regulatory harm” means harm to the integrity of the environmental regulatory system. Environmental violations that do not threaten environmental harm, including some reporting and recordkeeping violations, will nonetheless
generally threaten regulatory harms. Regulatory harms may include the costs to regulatory and enforcement agencies of investigating and prosecuting the underlying environmental violation; impairment of the ability of governmental agencies, legislatures, and scientific bodies to monitor, assess, and respond appropriately to environmental risks; and loss of public confidence in the effectiveness of the environmental regulatory system. While regulatory harms should generally be regarded as less severe than environmental harms, they may be appropriately considered at sentencing, particularly, as indicated in the culpability matrix, where the offender has purposefully or knowingly acted so as to undermine the integrity of the regulatory system.

6. The categories on the vertical axis should not be employed in a mechanistic fashion, but, rather, so as to effectuate the goal of the vertical axis, i.e., the assessment of relative culpability based on the harm threatened and the likelihood that the threatened harm would occur. If the culpability of the offender’s conduct is not adequately captured by any of the five categories, then an upward or downward departure should be employed, consistent with the basic structure of the matrix. Thus, for instance, if the offense conduct created an imminent danger of environmental harm that is clearly in excess of localized harm, but also clearly less than large-scale harm, the court should enhance the offense level to a midway point between localized and large-scale harm.

7. The vertical axis reflects threatened harm, not actual harm. Harm that actually occurred may, however, have some probative value in determining whether the threat of a particular harm was imminent. Moreover, where actual harm clearly and substantially differs from threatened harm, an upward or downward departure along the vertical axis to a midrange point between the actual and threatened harm may be appropriate.

8. The horizontal, state-of-mind axis relates to the offender’s knowledge and intent with respect to the threatened harms. The four categories are intended to track the basic mens rea categories of the Model Penal Code.

9. If the offender’s violation of the law was a result of a justifiable misunderstanding of the law, a downward departure may be appropriate to the extent that the misunderstanding mitigates the offender’s culpability. A departure on this basis will normally be limited to circumstances in which the offense conduct threatens no more than localized environmental harm and the offense conduct is otherwise reasonable. A misunderstanding of the law is not justifiable unless it is based on an authoritative interpretation of the law from an appropriate governmental agency, and no contrary authoritative interpretation is available at the time of the offense. The reasonability of the offender’s conduct should be assessed by reference to the severity of the harm threatened by the conduct, the likelihood of the harm occurring, the extent to which the risk of harm was merely
to the offender’s own person or property, the social benefits of the offender’s conduct (if any), and the availability of cost-effective alternatives to the offender’s conduct that would have reduced or eliminated the threat of harm.