

Washington Journal of Environmental Law & Policy

Volume 3 | Issue 2

11-1-2013

Practical Alternatives for Silvicultural Pollution Reduction in Light of *Decker v. NEDC*

Erin Anderson

Follow this and additional works at: <https://digitalcommons.law.uw.edu/wjelp>



Part of the [Environmental Law Commons](#), and the [Natural Resources Law Commons](#)

Recommended Citation

Erin Anderson, Notes and Comments, *Practical Alternatives for Silvicultural Pollution Reduction in Light of Decker v. NEDC*, 3 WASH. J. ENVTL. L. & POL'Y 297 (2013).

Available at: <https://digitalcommons.law.uw.edu/wjelp/vol3/iss2/6>

This Notes and Comments is brought to you for free and open access by the Law Reviews and Journals at UW Law Digital Commons. It has been accepted for inclusion in Washington Journal of Environmental Law & Policy by an authorized editor of UW Law Digital Commons. For more information, please contact lawref@uw.edu.

PRACTICAL ALTERNATIVES FOR SILVICULTURAL POLLUTION REDUCTION IN LIGHT OF DECKER V. NEDC

Erin Anderson

ABSTRACT: *Decker v. Northwest Environmental Defense Center* is a recently decided Supreme Court case that originated in the forests of Oregon. Frustrated by the level of pollution in Oregon rivers that was originating from logging roads, an environmental group sued the State to enforce the Clean Water Act and require Oregon to issue National Pollutant Discharge Elimination System (NPDES) permits for the pollution. The Supreme Court held that the Environmental Protection Agency’s (EPA) decision to exclude water pollution from logging roads from NPDES permitting was entitled to deference, reversing the Ninth Circuit’s decision that such pollution required NPDES permits under the Clean Water Act and the EPA’s Silvicultural Rule.

Part I will introduce the case and the issues more fully. Part II will provide the background to the case. Part III will discuss the case and its procedural history, focusing on the Ninth Circuit’s decision and the Supreme Court’s opinion. Part IV will discuss different policy models that may be useful to Oregon going forward. Part V will conclude that Oregon is still under pressure to change its policy, and that certain changes to its current regulations could reduce pollution from logging roads while still remaining cost-effective and with little administrative interference for the logging industry.

I. INTRODUCTION.....298

II. BACKGROUND 300

 A. The Clean Water Act Created the Point and Nonpoint Source Dichotomy 300

 B. The 1987 Water Quality Act Increased the Clean Water Act’s Scope with Respect to Nonpoint Sources 301

 C. The Silvicultural Rule’s Legality Has Long Been Contested..... 301

III. DECKER V. NORTHWEST ENVIRONMENTAL DEFENSE CENTER 303

 A. The Ninth Circuit Held that Silvicultural Discharges Required NPDES Permitting..... 303

 B. Decker v. NEDC Overturned the Ninth Circuit Case 304

 C. The Regulation of Silvicultural Pollution is Still a Pertinent Debate Post-Decker 304

IV. ANALYSIS: POLICY OPTIONS 306

 A. Oregon’s Forest Management System Addresses Silvicultural Discharge but is Inadequate..... 307

 B. NPDES Permitting Would not be as Financially

or Administratively Burdensome as the Industry Fears.....	311
C. Oregon Can Learn from the Examples of the Voluntary-Threat or Incentive Approach.....	315
V. CONCLUSION	317

I. INTRODUCTION

Northwest Environmental Defense Center v. Brown was brought to contest the EPA’s classification of silvicultural discharge as nonpoint source pollution, and the case highlights the difficulties of regulating this type of pollution.¹ “Silvicultural discharge” is stormwater discharge from “the growing and cultivation of trees.”² In this case, the pollution was being discharged into two rivers in Oregon.³ This pollution is particularly dangerous for salmon, as it smothers salmon eggs, reduces the oxygen levels in the water, and destroys the food source for juvenile salmon living in the rivers.⁴ The case reached the United States Supreme Court in 2013 as *Decker v. Northwest Environmental Defense Center*.⁵

Historically, the Clean Water Act has treated point source pollution differently from nonpoint source pollution,⁶ and Section 402(p) of the 1987 amendments to the Clean Water Act explicitly included industrial stormwater in the point source pollution that requires NPDES permitting.⁷ However, the EPA

1. *Nw. Envntl. Def. Ctr. v. Brown*, 476 F. Supp. 2d 1188, 1190 (D. Or. 2007) rev’d, 617 F.3d 1176 (9th Cir. 2010) *opinion withdrawn and superseded on denial of reh’g*, 640 F.3d 1063 (9th Cir. 2011) *rev’d and remanded sub nom. Decker v. Nw. Envntl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013) and *vacated and remanded sub nom. Nw. Envntl. Def. Ctr. v. Decker*, 728 F.3d 1085 (9th Cir. 2013).

2. POCKET OXFORD AMERICAN DICTIONARY 774 (Maurice Waite, et al eds., 2d ed. 2008).

3. *Nw. Envntl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1067 (9th Cir. 2011), *rev’d sub nom. Decker v. Nw. Envntl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

4. *Id.*; Tom Wolf, *Oregon Must Regulate Logging Roads to Protect the State’s Water Supply*, OREGONIAN, (June 20, 2012) available at http://www.oregonlive.com/opinion/index.ssf/2012/06/oregon_must_regulate_logging_r.html.

5. *Decker v. Nw. Envntl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

6. *See, e.g.* Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 844–45, 880, 886–887 (1972) §§ 301 (a), (b)(1)(A), 402(a), 502(12), (14) (codified as amended at 33 U.S.C. §§ 1311(a), (b)(1)(A), 1342(a), 1362(12), (14) (2011)). These provisions, like several others in the CWA, explicitly apply to “point source” pollution only, without similar regulatory requirements for nonpoint source pollution.

7. Water Quality Act, Pub. L. 100-4, 101 Stat. 69–71 (1987) § 405, 33 U.S.C. §

has consistently asserted that this provision does not include silvicultural discharges, and under its Silvicultural Rule it has excluded these specific silvicultural discharges from the point sources regulated under Section 402(p).⁸

The Ninth Circuit determined that logging roads should be categorized as industrial stormwater and point source pollution under Section 402(p).⁹ The Supreme Court reversed, and applying the deference principles of *Auer v. Robbins*,¹⁰ held that the EPA's decision to interpret its Phase I Stormwater Rule and Silvicultural Rule to exclude logging road discharges from National Pollutant Discharge Elimination System (NPDES) permitting was entitled to deference.¹¹

While *Decker* did not invalidate the Silvicultural Rule¹² the potential for a successful challenge to the EPA's classification of this pollution as nonpoint source raises questions of what other policy models could similarly reduce discharges from logging roads. The Court's decision neither foreclosed the possibility of future NPDES permitting for silvicultural discharge, nor did it prohibit the State from taking alternative actions to redress the pollution on its own.

Further, the Northwest Environmental Defense Center (NEDC) and others have promised to continue pursuing this issue.¹³ For this reason, Oregon may want to address the issue of logging road discharge to avoid a prolonged fight. Oregon could develop their own permitting system, as other states have,¹⁴ or pursue a voluntary-threat program tailored to have

1342(p) (2012).

8. *Brown*, 640 F.3d at 1073–1074 (Court summarizes the EPA's position on the interpretation of the Silvicultural Rule); 40 C.F.R. § 122.27(b)(1) (1983) (Modern iteration of the Silvicultural Rule at issue in *Decker*).

9. *Brown*, 640 F.3d at 1066.

10. 519 U.S. 452 (1997) (As a general rule, courts defer to an agency's interpretation of its own rules "unless the interpretation is plainly erroneous or inconsistent with the regulation." *Id.* at 461).

11. *Decker*, 133 S. Ct. at 1337.

12. *Id.*

13. Scott Learn, *Supreme Court Decision Won't End Battle Over Logging Road Pollution, Activists Vow*, OREGONIAN, Mar. 20, 2013, http://www.oregonlive.com/environment/index.ssf/2013/03/supreme_court_decision_wont_en.html.

14. James M. McElfish, et. al., *Inventing Nonpoint Controls: Methods, Metrics and Results*, 17 VILL. ENVTL. L.J. 87, 175–76 (2006).

low costs for both Oregon and the logging operators.¹⁵

This Comment, in light of *Decker*, discusses and analyzes different policy models for regulating silvicultural discharges so as to efficiently reduce pollution. Specifically, it considers the dynamics of Oregon's current system, the NPDES permitting system, and other models that compel voluntary compliance through a series of incentives and disincentives. It concludes that Oregon's program is inexpensive but largely inefficient, and that while the NPDES permitting is costly, it is not as expensive as the industry alleges and has strong pollution reduction benefits. Further, models from theoretical economics and regulatory schemes of other states may provide both the pollution reduction that the plaintiffs in *Decker* desire and offer enough flexibility to satisfy industry concerns over costs and administrative burdens. Oregon has made an effort to address silvicultural discharge, but a program modeled after more stringent systems, could further reduce pollution while still addressing the economic and logistical concerns of the industry.

II. BACKGROUND

A. *The Clean Water Act Created the Point and Nonpoint Source Dichotomy*

Congress first distinguished between the types of pollution that are and are not regulated when it created the modern Clean Water Act through the Federal Water Pollution Control Act Amendments of 1972. Under Section 301 of the Act, "the discharge of any pollutant by any person shall be unlawful,"¹⁶ except when done under NPDES permitting.¹⁷ The term "discharge," however, refers only to "any addition of any pollutant to navigable waters from any point source."¹⁸ Section 502(14) defines point source pollution as "any discernible,

15. See Jordan F. Suter, et. al., *Voluntary-Threat Approaches to Reduce Ambient Water Pollution*, 92 AM. J. AGRIC. ECON. 1195 (2010) (Suter and his co-authors propose a model for nonpoint source pollution reduction whereby the regulator need only monitor ambient pollution and the operator may use the most cost-effective methods available to keep ambient pollution below the acceptable level).

16. 33 U.S.C. § 1311(a) (2012).

17. 33 U.S.C. § 1342(a) (2012).

18. 33 U.S.C. § 1362(12) (2012).

confined and discrete conveyance including . . . any pipe, ditch, channel, tunnel, conduit . . .”¹⁹ While lacking a statutory definition, *Brown* defined nonpoint source pollution as being “widely understood to be the type of pollution that arises from many dispersed activities over large areas and is not traceable to any single discrete source.”²⁰ Under the 1972 Clean Water Act, point source pollutants are subject to strict regulations.²¹ There is no similar provision for regulating nonpoint sources.²²

B. *The 1987 Water Quality Act Increased the Clean Water Act’s Scope with Respect to Nonpoint Sources*

The 1987 Water Quality Act made two important changes. First, Section 319 of the Act created the Nonpoint Source Management Program, which appropriated federal funds to finance projects undertaken by state governments to combat nonpoint source pollution within their boundaries.²³ This section does not extend federal regulatory oversight to nonpoint source pollution, but it assists states in combating localized nonpoint source pollution.

The 1987 Water Quality Act also added a provision to Section 402 that required NPDES permitting for certain industrial and municipal stormwater.²⁴ Section 402(p) applies tiered permitting and regulation requirements to different types of discharges.²⁵ This provision and the subsequent EPA rules created in accordance with this law were at the center of the legal dispute in *Decker*.²⁶

C. *The Silvicultural Rule’s Legality Has Long Been Contested*

Soon after Congress passed the 1972 Clean Water Act, the

19. 33 U.S.C. § 1362(14) (2012).

20. *Nw. Env’tl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1070 (9th Cir. 2011) (quoting *League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren*, 309 F.3d 1181, 1184 (9th Cir. 2002)), *rev’d sub nom. Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

21. 33 U.S.C. § 1311 (2012).

22. *See* 33 U.S.C. § 1251–1387 (2012).

23. 33 U.S.C. § 1329 (2012).

24. Clean Water Act §405, 33 U.S.C. § 1342(p) (2012).

25. *Id.*

26. *Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326, 1330 (2013).

Environmental Protection Agency (EPA) began issuing regulations to clarify NPDES permitting requirements. In 1973, the EPA issued a rule that outlined specific types of pollution that were exempt from the definition of point source, including water pollution from silvicultural activity.²⁷ After the Natural Resource Defense Council successfully argued that the EPA exceeded its authority by categorically exempting whole classes of pollutants,²⁸ the EPA began modifying the exemptions to be more specific and avoid the overbreadth problem.²⁹ These revisions eventually led to the creation of the Silvicultural Rule at issue in *Decker*, which specifies what types of Silvicultural discharges are subject to permitting requirements in addition to the industrial activity detailed in the Phase I Stormwater Rule.³⁰ In 1976, the EPA modified the rule to state that the term “silvicultural point source” means “[A]ny discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States.”³¹

Later, the EPA revised the Silvicultural Rule to explicitly state that the definition of “silvicultural point source” does not include certain silvicultural activities, such as “surface drainage, or road construction and maintenance from which there is natural runoff.”³² This was the language at issue in *Brown*. Since the Ninth Circuit’s ruling, the EPA has continued to apply the Silvicultural Rule exempting discharge from logging roads from the definition of “point source” and stated its intention to further refine the Silvicultural Rule to reflect the agency’s conviction.³³ Through creation and ongoing

27. *Nw. Env'tl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1073 (9th Cir. 2011), *rev'd sub nom. Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

28. *Id.* at 1073–74 (The Court in *Brown* summarized *Natural Res. Def. Council v. Train*, 396 F. Supp. 1393 (D.D.C. 1975), a case in which the district court held that the EPA acted illegally by exempting certain classes of point source pollution from Section 402 permitting).

29. *Id.*

30. 40 C.F.R. § 122.27 (2013); *see also* 40 C.F.R. § 122.26 (2013).

31. 40 C.F.R. § 122.27(b)(1) (2013).

32. 40 C.F.R. § 122.27(b)(1) (2013).

33. *Stormwater Discharges from Forest Roads*, U.S. ENVTL. PROT. AGENCY <http://cfpub.epa.gov/npdes/stormwater/forestroads.cfm> (last visited Nov. 23, 2013)

modification of the Silvicultural Rule, the EPA has consistently asserted that discharges from logging roads should not be considered a point source pollutant subject to NPDES permitting.

III. DECKER V. NORTHWEST ENVIRONMENTAL DEFENSE CENTER

A. *The Ninth Circuit Held that Silvicultural Discharges Required NPDES Permitting*

Brown reached the Ninth Circuit in 2010 after NEDC appealed from the district court's dismissal of the case.³⁴ NEDC alleged that the defendants, both private logging operators and public officials, violated the Clean Water Act by failing to obtain NPDES permits for discharge from two logging roads in the Tillamook State Forest.³⁵ These roads were designed so that the discharges were carried through a series of ditches and culverts and deposited into two nearby rivers.³⁶ NEDC discovered that these discharges deposited large amounts of sediment into the rivers and threatened salmon and other wildlife dependent on the rivers.³⁷

On appeal, the Ninth Circuit found that the EPA's focus on the source of the pollution, rather than the manner of conveyance, conflicted with the language of the 1987 Water Quality Act.³⁸ The EPA had thus improperly exempted certain point sources from regulation, exceeding its authority.³⁹ Given this difference between the language of the Clean Water Act and the Silvicultural Rule, the court held that the Silvicultural Rule was ambiguous and could be interpreted to include logging road discharges within the point source definition.⁴⁰

The court then evaluated the defendants' next claim that the logging road discharge was not a point source under the 1987

(stating that EPA "believes that stormwater discharges . . . should be evaluated under section 402(p)(6)" and that EPA has "clarif[ied]" their stormwater regulations).

34. *Brown*, 640 F.3d at 1067.

35. *Id.* at 1066–67.

36. *Id.* at 1067.

37. *Id.* at 1067–68.

38. *Id.* at 1074–75.

39. *Id.* at 1079–80.

40. *Id.* at 1078–80.

Act. Under the 1987 amendments, Congress created a two-tiered regulation system for stormwater, designating “Phase I” regulations as discharges from industrial activity.⁴¹ The court found that the discharges from the logging roads were point sources under this definition⁴² and held that the discharges required NPDES permits under the Clean Water Act.⁴³

B. *Decker v. NEDC Overturned the Ninth Circuit Case*

After the Ninth Circuit declined to rehear the case, the Supreme Court granted certiorari and reversed the Ninth Circuit’s decision.⁴⁴ Although the Supreme Court determined that there was no jurisdictional bar to the suit,⁴⁵ and that the case was not moot,⁴⁶ the Court held that the EPA’s interpretation of the Phase I Stormwater Rule—that logging roads were not associated with industrial activity—was entitled to deference⁴⁷ under the doctrine of *Auer v. Robbins*.⁴⁸ Because the EPA had interpreted its rules so as to exclude logging road discharges from the category of pollution requiring permits, the Court determined it was unnecessary to consider the question of whether the pollution was or was not a point source.⁴⁹ Regardless, the Court’s decision reversed the Ninth Circuit’s holding that the discharges in question required NPDES permitting.⁵⁰

C. *The Regulation of Silvicultural Pollution is Still a Pertinent Debate Post-Decker*

Although the Supreme Court’s decision in *Decker* does not require Oregon to change its forest practices, there are still reasons for Oregon and other states to adopt more efficient

41. *Id.* at 1083.

42. *Id.* at 1083–1084.

43. *Id.* at 1087.

44. *Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326, 1338 (2013).

45. *Id.* at 1334–35.

46. *Id.* at 1335–36.

47. *Id.* at 1337.

48. 519 U.S. 452 (1997).

49. *Decker*, 133 S. Ct. at 1338.

50. *Id.*

approaches to dealing with logging road discharges. The plaintiffs in the case have expressed intent to continue pursuing this matter.⁵¹ The Court only determined that the EPA's decision should be given deference and did not reach the issue of whether or not logging road discharges are point source pollution.⁵² The plaintiffs can still pressure the EPA to change their interpretation and declare that logging road discharges are point source pollution. Furthermore, in its recent remand order, the Ninth Circuit reiterated its holding that:

When stormwater runoff is collected in a system of ditches, culverts, and channels and is then discharged into a stream or river there is a 'discernible, confined and discrete conveyance' of pollutants, and there is therefore a discharge from a point source within the meaning of the Clean Water Act's basic definition of a point source.⁵³

Additionally, Oregon may need to address this issue in order to protect salmon runs. Oregon has already designated the two rivers at issue in this case as salmon anchor habitats,⁵⁴ and if the State wishes to meet the program goals of reducing the short term risk to populations and improving stream conditions,⁵⁵ they may need to address logging road discharges.⁵⁶

The effect of silvicultural discharge on salmon populations might also force Oregon to address this issue. Several salmon species in nearby rivers are currently recognized under the Endangered Species Act as threatened, although this designation does not yet extend to salmon in the rivers at issue in *Decker*.⁵⁷ If the Endangered Species Act were to ever be

51. Learn, *supra* note 13.

52. *Decker*, 133 S. Ct. at 1338.

53. Order on Remand at 3, Nw. Envtl. Def. Ctr. v. *Decker*, 728 F.3d 1085 (2013) (No. 07-35266).

54. OR. DEPT OF FORESTRY, SALMON ANCHOR HABITATS STRATEGY FOR NORTHWEST OREGON STATE FORESTS 5 (2003).

55. *Id.* at 1.

56. *Kilchis and Little North Fork Wilson Rivers, Oregon*, PACIFIC RIVERS COUNCIL, <http://pacificrivers.org/legacy-rivers/little-north-fork-wilson-river-oregon> (last visited Nov. 23, 2013).

57. See Endangered and Threatened Marine and Anadromous Fish, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, <http://www.nmfs.noaa.gov/pr/species/esa/fish.htm> (last visited Oct. 30, 2013); *Coho Salmon Critical Habitat*,

extended to protection of salmon in these rivers, Oregon would have to address threats to the Salmon population, including silvicultural pollution, to avoid an illegal taking under Section Nine of the Act.⁵⁸ These potential dangers to the salmon population could require the state of Oregon to address logging road discharges more effectively, despite the EPA's decision not to require NPDES permitting for such discharges.

Furthermore, the Supreme Court's decision does not preclude Oregon from creating its own state-level permit.⁵⁹ The Clean Water Act leaves much regulatory power with the states, especially with regard to nonpoint sources.⁶⁰ Other states, such as Maryland, have employed a permitting process for their silvicultural discharges.⁶¹ Oregon could still create its own NPDES-like system and use a system of state-level permits to address this problem.

IV. ANALYSIS: POLICY OPTIONS

With the Supreme Court's decision in *Decker*, the State of Oregon now stands at a crossroads. On one hand, the plaintiffs in the case have confirmed that they are committed to pursuing greater silvicultural discharge reduction in the State.⁶² On the other hand, industry leaders have expressed serious concerns that further regulation through a permitting system will be cost-prohibitive and create overly-burdensome

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, <http://www.nmfs.noaa.gov/pr/species/fish/cohosalmon.htm#habitat> (last visited Nov. 23, 2013); *Chinook Salmon Critical Habitat*, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, <http://www.nmfs.noaa.gov/pr/pdfs/criticalhabitat/chinooksalmon.pdf> (last visited Nov. 23, 2013).

58. *See generally*, Endangered Species Act §9, 16 U.S.C. §1538(a)(1)(B) (2012). Sedimentation of rivers caused by silvicultural pollution is a major contributor to salmon population declines. Brief for Pac. Coast Fed'n of Fishermen's Ass'n, et. al., as Amicus Curiae Supporting Respondent at 21–31, *Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (No. 11-338) (2013) In the Amicus Brief Filed by the Pacific Coast Federation of Fishermen's Associations, the Amicus explains that the ESA listing of salmon species in other areas was driven in large part by the negative impacts of silvicultural pollution on those populations. *Id.* at 21–22.

59. *Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326, 1338 (2013).

60. *See, e.g.*, Clean Water Act § 319, 33 U.S.C. § 1329 (2012).

61. McElfish et al., *supra* note 14, at 193.

62. Learn, *supra* note 13.

administrative barriers.⁶³ If Oregon wants to act in the aftermath of *Decker*, it will need to address the issues that both groups raise.

In order to determine what policy options Oregon has moving forward, it is important to first discuss and analyze the State's current system. Next, though not mandated by the Court,⁶⁴ there is still a chance that NPDES permitting could be applied to logging road discharges in the future.⁶⁵ Even if this permitting scheme is not used, it is important to weigh the claims that the logging industry made in this case about economic and administrative costs so that they can be adequately addressed in any new policy. Finally, Oregon can look to theoretical economic models and successful regulatory schemes in other states as examples of new policy options that would address both the pollution reduction that the plaintiffs want and the economic and administrative efficiency that the industry argues is necessary.

A. *Oregon's Forest Management System Addresses Silvicultural Discharge but is Inadequate*

Oregon's current system for dealing with logging road discharges is derived from a combination of statutes and administrative rules.⁶⁶ Under ORS section 527.765, Oregon's Board of Forestry must create a series of best management practices (BMPs) that will lead forest operators to meet the Oregon Department of Environmental Quality's water quality standards.⁶⁷ However, Oregon creates an exception to the Environmental Quality Commission's Standards through ORS section 527.770.⁶⁸ Under section 527.770, a forest operator

63. Brief for Am. Forest Res. Council et al. as Amicus Curiae Supporting Petitioners at 6, *Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013); Brief for Alabama Forestry Ass'n et al. as Amicus Curiae Supporting Petitioners at 1, *Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

64. *Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326, 1338 (2013).

65. *Id.* The Court did not reach the issue of whether or not silvicultural discharges were industrial stormwater under § 402, so that possibility remains open should the EPA change their interpretation of the law.

66. OR. REV. STAT. §§ 527.765–770 (2011); Oregon Forest Practices Act, OR. ADMIN. R. 629.600–665 (2013).

67. OR. REV. STAT. § 527.770 (2011).

68. *Id.*

cannot violate Oregon's water quality standards so long as the operator complies or in good faith proposes to comply with the BMPs promulgated by the Board of Forestry.⁶⁹

Under sections 527.710 and 527.765, the Board of Forestry must create BMPs that govern silvicultural discharges, which are enforced by various departments within the Oregon Department of Forestry.⁷⁰ However, these departments make up a small fraction of the State's forestry budget: In the 2011–2013 budget, Oregon's Department of Forestry dedicated \$38,233,791, or 12.3%, of the total Department Budget to private forest management and \$95,159,166, or 29.65% to public forest management.⁷¹ Of the 894.64 Full Time Equivalents (FTEs) that the Department employed in the 2011–2013 biennium,⁷² approximately sixty-four were designated as “Forest Practices Staff” for private forests⁷³ and roughly 182.14 FTEs for the State Forests Department.⁷⁴ Moreover, the departments are charged with enforcing all of the State's BMPs, not just those related to logging road discharges, meaning that logging road pollution reduction is only a minor part of their responsibilities and budget expenditures.⁷⁵

The Board of Forestry has created BMPs that specifically address the maintenance of logging roads.⁷⁶ These provisions are written very broadly.⁷⁷ Section (2) requires operators to “maintain active and inactive roads in a manner sufficient both to provide a stable surface and keep drainage system

69. *Id.*

70. OR. REV. STAT. § 527.710, 527.765 (2011).

71. OREGON DEPARTMENT OF FORESTRY, 76th Oregon Legislative Assembly 2011–13 BIENNIAL BUDGET WAYS AND MEANS PRESENTATION at 41 (2011).

72. *Id.* at 39.

73. *Id.* at 88.

74. OREGON DEPARTMENT OF FORESTRY, 2013–2015 BIENNIAL BUDGET WAYS AND MEANS BIENNIAL BUDGET WAYS AND MEANS PRESENTATION 3–5 (2013) (The Department reports that it experienced a thirty percent loss to its staff and expenditures in 2010). OREGON DEPARTMENT OF FORESTRY, 2007– 2009 INTERNAL LEGISLATIVELY ADOPTED BUDGET REPORT 2 (2007) (The pre-2010 number of FTEs was 260.2).

75. OR. REV. STAT. § 527.770 (2011); *see also* OR. ADMIN. R. 625.600–665 (2013) (Listing BMPs).

76. *See* OR. ADMIN. R. 629-625-0600 (2011).

77. *See, e.g., Id.* §§ (2)–(4), (6).

operating as necessary to protect water quality.”⁷⁸ Furthermore section (4) requires operators “provide effective road surface drainage,”⁷⁹ and then lists several types of road management that could satisfy the requirement.⁸⁰ These provisions do not define what “sufficient” or “effective” standards require,⁸¹ which could leave these rules open to broad interpretation by the Board and forest operators.

Additionally, though section 527.765 allows for modification of the practices should they prove to be unworkable or ineffective,⁸² the provision requires a petition from a third party or the Environmental Quality Commission in order to begin modification of the practices,⁸³ meaning that the Board is generally not responsible for conducting its own analyses to determine the viability and effectiveness of the standards.

Oregon’s system also creates a series of enforcement and penalty processes.⁸⁴ There are civil penalties,⁸⁵ Class A misdemeanors,⁸⁶ and criminal penalties for serious violations.⁸⁷ This system is enforced by state foresters,⁸⁸ who will issue a written statement of unsatisfactory condition if the violation can be corrected in time to prevent damage, or a citation if the damage cannot be avoided.⁸⁹ Once a citation is issued, the Oregon Department of Forestry can assess a penalty between 100 dollars and 5000 dollars,⁹⁰ compel compliance through a court order, or bill the violator for the costs of the repairs.⁹¹

78. *Id.* § (2).

79. *Id.* § (4).

80. OR. ADMIN. R. 629-625-0600 (2011).

81. *Id.*

82. OR. REV. STAT. § 527.765(3) (2011).

83. *Id.* §(3)(a), (c).

84. See 7 OR. DPT. OF FORESTRY FOREST PRAC. NOTES 4 (revised Oct. 2002), available at <http://www.oregon.gov/odf/privateforests/docs/civilpenalties.pdf>. OR. REV. STAT. §§ 527.990, 527.992 (2011).

85. OR. REV. STAT. §527.992 (2011).

86. OR. REV. STAT. §527.990 (2011).

87. 7 OR. DPT. OF FORESTRY FOREST PRAC. NOTES 4 (revised Oct. 2002).

88. *Id.* at 2.

89. *Id.*

90. *Id.* at 4. The actual minimum penalty is twenty-five dollars, but any penalty less than 100 dollars will not be enforced if no other violations occur within a year. *Id.*

91. *Id.* at 3.

Violations will not always result in civil penalties to the operator.⁹² Once a citation is issued, the violating operator can negotiate with the Department of Forestry to enter into a “consent-order.”⁹³ Under these orders, the violating operator and the Department of Forestry agree that the operator will correct the damage in lieu of any additional penalty.⁹⁴ If the order is not adhered to, the suspended penalty may be enforced against the violating operator.⁹⁵

The biggest issue that Oregon faces with its current system for regulating logging road discharges is not necessarily the expense of the program, but rather its failure to adequately reduce the pollution. The Oregon system makes the BMPs for road maintenance enforceable with civil and criminal penalties,⁹⁶ but empirical and anecdotal evidence indicates that pollution from silvicultural discharges is still a major issue despite these regulations.

Empirically, these policies have led to pollution problems in Oregon rivers. Several amicus briefs filed on behalf of the respondent highlighted the serious pollution problems that Oregon rivers face as a result of lax standards for water quality in forest management.⁹⁷ For example the American Fisheries Society amicus brief alleges that in a 2006 study, 12,000 miles of Oregon streams violated water quality standards for sedimentation.⁹⁸ This issue has also been highlighted by Oregon journalists, who note that logging road discharge brings high levels of sedimentation to rivers during the fall and winter, causing problems for both salmon populations and humans whose source of drinking water is compromised.⁹⁹ Generally, Oregon has struggled with pollution

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. OR. REV. STAT. §§ 527.990, 527.992 (2011).

97. *See, e.g.*, Brief for Pac. Coast Fed’n of Fishermen’s Ass’n, et. al. as Amicus Curiae Supporting Respondent at 19–21, *Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. ___ (Mar. 20, 2013), 133 S. Ct. 1326 (2013); Brief for W. Div. of the Am. Fisheries Soc’y, et. al. as Amicus Curiae Supporting Respondent at 16–19, *Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. ___ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

98. Brief for W. Div. of the Am. Fisheries Soc’y, et. al. as Amicus Curiae Supporting Respondent at 11, *Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. ___ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

99. *See* Wolf, *supra* note 4; Beth Casper, *Effect of Logging Incident on City’s*

reduction from silvicultural discharge.

Oregon uses comprehensive laws and regulations for forest management. However, the breadth of exceptions and discretion in enforcement delegated to the Department of Forestry undermines their effectiveness with respect to water pollution from logging roads. The current pollution reduction system in Oregon is a relatively small portion of the overall forestry budget, but there is evidence that actual pollution levels are higher than desired.

B. *NPDES Permitting Would not be as Financially or Administratively Burdensome as the Industry Fears*

Although the Supreme Court deferred to the EPA's decision not to require NPDES permitting, it is necessary to address the economic and logistical concerns of the petitioners and their supporters before discussing new regulatory possibilities. In *Decker*, the petitioners and their supporters argued that the extending NPDES permitting to logging roads created an exceptional burden on the regulated parties. For example, in its amicus brief on behalf of the petitioner, the American Forest Resource Council argued that obtaining NPDES permits would be a "lengthy and expensive process."¹⁰⁰ Likewise, the Alabama Forestry Association argued that NPDES permitting of logging roads would be greatly expensive with no added benefit.¹⁰¹ The amicus continued to argue that the costs of acquiring and complying with an NPDES permit were prohibitive and that a backlog of permit applications at the EPA would leave many forest operators in limbo while waiting for the EPA and states to administer a new NPDES program.¹⁰² In reality these burdens and costs would not be prohibitive.

First, Oregon is authorized to oversee most of its own NPDES permits.¹⁰³ The EPA's federal permitting program

Drinking Water Spotlights Forest Rules, Statesman Journal, Jan. 28, 2007, available at <http://wflc.org/inthenews/salmon/ORmedia/fallscity>.

100. Brief for Am. Forest Res. Council et al. as Amicus Curiae Supporting Petitioners, *supra* note 63, at 6.

101. Brief for Alabama Forestry Ass'n et al. as Amicus Curiae Supporting Petitioners, *supra* note 63, at 1.

102. *Id.* at 9.

103. *Current EPA NPDES Permits for Oregon and Washington*, U.S. ENVTL. PROT. AGENCY, <http://yosemite.epa.gov/r10/water.nsf/NPDES+Permits/CurrentOR&WA821>

functions mostly as a stopgap measure for states that do not have their own systems.¹⁰⁴ Any new NPDES permits that would affect the Oregon silvicultural industry would be administered by Oregon, rather than directly by the EPA.

Second, NPDES permits require detailed plans from the regulated party explaining how the desired pollution reduction will be achieved.¹⁰⁵ Under the EPA's direction, these statements must include the BMPs for the industry.¹⁰⁶ Additionally, the permits have mandatory requirements for pollution reduction attached.¹⁰⁷ There are generally two types of NPDES permits; individual and general permits.¹⁰⁸ Regulatory costs could vary greatly depending upon whether the permits for silvicultural discharges are individual or general.

Under the Oregon NPDES system, individual permits require several steps. Each entity must apply for its own individual permit, and in addition to its application materials, the entity must provide management plans and evaluation reports.¹⁰⁹ Under the current Oregon system, however, individual permits are used only for municipalities.¹¹⁰ All other

(last visited Nov. 23, 2013) (explaining that exceptions to Oregon permitting are permits for tribal lands within Oregon).

104. *Stormwater Discharges from Industrial Facilities*, U.S. ENVTL. PROT. AGENCY, <http://cfpub.epa.gov/npdes/stormwater/indust.cfm>. (last visited Nov. 23, 2013) (Although, as noted in the last footnote, the EPA also oversees at least some tribal permitting. U.S. ENVTL. PROT. AGENCY, *supra* note 103.).

105. See U.S. ENVTL. PROT. AGENCY, Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) 12–13 (2009), *available at* http://www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf. [hereinafter Multi-Sector General Permit] (The Multi-Sector General Permit, although not directly applicable to Oregon since the EPA is not the permitting authority in Oregon, exemplifies permitting requirements that are present in all EPA and state-level NPDES permits.); OR. DEP'T OF ENVTL. QUALITY, APPLICATION FOR NPDES INDUSTRIAL STORMWATER, GENERAL PERMIT NUMBER 1200-A, *available at* <http://www.deq.state.or.us/wq/wqpermit/docs/forms/1200Application.pdf>.

106. Multi-Sector General Permit, *supra* note 105, at 12.

107. *Id.* at 16.

108. OFFICE OF WASTEWATER MGMT, U.S. ENVTL. PROT. AGENCY, *Water Permitting 101* 6–7, *available at* <http://www.epa.gov/npdes/pubs/101pape.pdf>.

109. See Or. Dep't of Env'tl. Quality, *NPDES Stormwater Discharge Permits - Phase I Municipalities (MS4)*, WATER QUALITY PERMIT PROGRAM, <http://www.deq.state.or.us/wq/stormwater/municipalph1.htm> (last visited Nov. 23, 2013).

110. See Or. Dep't. of Env'tl. Quality, *NPDES Stormwater Permit Application Forms and Permit Fees*, WATER QUALITY PERMIT PROGRAM, <http://www.deq.state.or.us/wq/wqpermit/stminfo.htm> (last visited Nov. 23, 2013).

industries use general permits.¹¹¹ Consequently, it is likely that the permit type used for silvicultural discharges would be a general permit, not an individual permit.

Third, the Ninth Circuit responded to industry concerns in *Brown* by mentioning Federal general permits as a way to lower the burden of imposing NPDES permitting on silvicultural discharges.¹¹² These permitting systems create one permit for an entire industry, and individual operators can then apply to be included under the general permit.¹¹³ These permits lower the administrative, financial, and other burdens that would otherwise be placed on both the operators and regulators under an individual permitting system.¹¹⁴ The Oregon applications for general permits are about five pages long.¹¹⁵ The general permit application must also be accompanied by a two page land use compatibility statement approved by a county official¹¹⁶ and a pollution control plan and checklist.¹¹⁷ Generally, these forms are brief and easy to fill out, making a general permit a very simple permitting option under the NPDES system.

Fourth, Oregon already has an NPDES administrative infrastructure, the Department of Environmental Quality, charged with creating and overseeing the state's NPDES permits.¹¹⁸ Accordingly, Oregon would not need to undertake

111. *See id.*

112. *Nw. Env'tl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1086 (9th Cir), *rev'd sub nom. Decker v. Nw. Env'tl.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326 (2013).

113. *See Multi-Sector General Permit*, *supra* note 105, at 1.

114. *See generally Multi-Sector General Permit*, *supra* note 105; *compare* Or. Dep't. of Env'tl. Quality, *supra* note 110, *with* Or. Dept. of Env'tl. Quality, *supra* note 109. General permits lower the administrative burden and costs that operators would otherwise bear if they had to apply for and maintain their own individual permits. OFFICE OF WASTEWATER MGMT, *supra* note 108, at 7.

115. *See, e.g.,* OR. DEP'T OF ENVTL. QUALITY, 08-WQ-006, APPLICATION: NPDES INDUSTRIAL STORMWATER GENERAL PERMIT, NOS. 1200-Z, 1200-ZN, AND 1200-COLS, available at <http://www.deq.state.or.us/wq/wqpermit/docs/forms/application1200AZCOLS.pdf>. There are several types of general permits that Oregon uses; this permit is exemplary of the majority of general permits that Oregon uses.

116. OR. DEP'T OF ENVTL. QUALITY, 08-WR-006, LAND USE COMPATIBILITY STATEMENT (2008). There appears to be no cost to the applicant to get this LUC form approved by the county official.

117. OR. DEP'T OF ENVTL. QUALITY, *supra* note 115.

118. *See* OR. DEP'T OF ENVTL. QUALITY, *About Us*, http://www.oregon.gov/deq/WQ/Pages/about_us.aspx (last visited Nov. 23, 2013) ("In addition to local programs, the Environmental Protection Agency (EPA) delegates authority to DEQ to operate federal environmental programs within the state such as the Federal Clean Air, Clean

the costly task of developing the administrative structure and capacity if the EPA were to change its interpretation of the Silvicultural Rule.

In sum, the cost and administration of using NPDES general permits might not be prohibitively expensive. While the industry could expect to see some compliance costs, they would be significantly smaller than those under an individual permit program. Unfortunately, while general permits provide the polluter the chance to rectify the problem if there is a breach of the permit, but such a breach is considered a violation of the Clean Water Act.¹¹⁹ The costs of these violations is large, in the range of tens to hundreds of thousands of dollars.¹²⁰ Conversely, these high violation costs would strongly incentivize compliance. General permits would also require operators to adhere to industry-specific requirements listed in the permit and BMPs enumerated in the pollution control plan,¹²¹ which could increase their costs if these requirements vary drastically.

Under an EPA general permit, this oversight is left largely to the polluter, but the provision does allow the government body to review the stringency of the polluter's standards and require changes if the standards are inadequate.¹²² This section also allows for government inspection of the sites to ensure compliance, though it is unclear how frequent these inspections occur.¹²³ The NPDES system can also be enforced through citizen suits.¹²⁴ This provision allows private citizens to sue operators that violate the permit in order to enforce the requirements of the Clean Water Act,¹²⁵ which could create other potential costs for non-complying operators that do not exist under Oregon's current system.

Water, and Resource Conservation and Recovery Acts”).

119. See Multi-Sector General Permit, *supra* note 105, at 7. The MGSP is not directly applicable to Oregon since the EPA does not oversee Oregon NPDES permitting; however it is an example of regulatory standards that are incorporated into all NPDES permitting.

120. *Id.* at app. B-2-4.

121. Multi-Sector General Permit, *supra* note 105, at 12.

122. See *Id.* at 19.

123. *Id.* at 19.

124. Clean Water Act § 505, 33 U.S.C. § 1365. (2012).

125. *Id.*

C. *Oregon Can Learn from the Examples of the Voluntary-Threat or Incentive Approach*

A third approach that may create an efficient silvicultural water pollution reduction program involves creating a system of rewards and penalties that compel voluntary compliance by the regulated parties. This system is referred to as the “voluntary threat” approach in economics.¹²⁶ Although this approach will pose new costs to both the regulated polluter and the regulator, it can create very efficient pollution reduction if tailored properly. Additionally, this approach allows for greater policy innovation and more market-driven solutions than the NPDES permit does, which allows regulating polluters and regulators to reduce their own costs.

The theory uses an ambient water pollution threshold as its basis for the regulation, allowing the polluter to devise its own methods for reducing pollution.¹²⁷ Should the polluters fail to reduce their pollution to the desired level, a tax penalty immediately kicks in.¹²⁸ Through their research, Jordan Suter and his co-authors have found that where a penalty is directly proportional to the amount of excess pollution, the only cost-minimizing option is for operators to comply with the program and meet the required level of pollution.¹²⁹ Several states have regulatory schemes that feature elements of the system that Suter and his co-authors describe.¹³⁰ Many do not employ the ambient water control system suggested by Suter and others, but these examples still demonstrate how a system of rewards and potential penalties can compel industry actors to comply and reduce pollution.

For example, Tennessee’s program for reducing silvicultural nonpoint source pollution is based on a federally-funded education program.¹³¹ This program provides individual and small group education on forestry BMPs,¹³² after which the forest operators receive certifications for their participation.¹³³

126. See generally, Suter et al., *supra* note 15.

127. *Id.* at 1195–98.

128. *Id.* at 1198.

129. *Id.* at 1200–02.

130. See generally James M. McElfish, et. al., *supra* note 14.

131. *Id.* at 120.

132. *Id.* at 113–14.

133. *Id.* at 114–15.

Many saw and paper mills in Tennessee refuse to accept timber from an operator who does not have current certification from the general education program, creating both a reward and a penalty for those who do and do not seek certification, respectively.¹³⁴ In this way the program operates similarly to the theoretical voluntary-threat program.

Minnesota also has a program based on voluntary compliance to address silvicultural pollution, but, unlike Tennessee, its system is solely based on rewards for pollution reduction, with no penalty for failure to meet the standards.¹³⁵ Minnesota's operators receive payments based on the number of acres enrolled in their program, and they must have forest management plans and adhere to the state's voluntary forest guidelines.¹³⁶ Within the first year of its implementation, 350 forest owners representing 700,000 acres of land enrolled in the program.¹³⁷ Unfortunately, first year monitoring showed that a large number of roads and trails near wetlands and streams did not have appropriate water diversion devices,¹³⁸ raising questions of how successful an incentive-based program can be without an adequate disincentive for non-compliance.

In their article "Voluntary-Threat Approaches to Reduce Ambient Water Pollution," Suter and his fellow researchers propose a model of nonpoint source pollution reduction through a program based on ambient pollution levels.¹³⁹ In the case of Oregon's logging road pollution, the ambient water standards could be measured for compliance through testing of the two rivers affected by discharges from the logging roads at issue in *Brown*.

Suter and others created a model policy in which the only portion developed by the regulating authority is the threshold of allowable nonpoint source pollution into a given body of water.¹⁴⁰ This allows an operator to choose options that are the most cost-effective for them, so long as the steps taken reduce

134. *Id.* at 115–16.

135. *Id.* at 152–55.

136. *Id.* at 155.

137. *Id.*

138. *Id.*

139. Suter et al., *supra* note 15, at 1195–96.

140. *Id.* at 1197–98.

pollution by the necessary amount. In practice, many programs also provide a series of behavioral standards or BMPs to help the polluters meet the required pollution reduction,¹⁴¹ but theoretical economics suggests that a successful program can leave the means for pollution reduction to the discretion of the operator so long as there is a sufficient penalty should pollution exceed the allowed amount.¹⁴²

Additionally, Oregon may be able to receive at least partial funding from the federal government for a new regulatory program. Under the federal funding program created by Section 319(h) of the 1987 Water Quality Act amendments, states have been able to apply for federal funding to cover the costs of creating a regulatory program.¹⁴³ This funding would be available whether Oregon chooses to create only an ambient water pollution standard or whether they provide a more structured plan, as Tennessee has. This could greatly offset Oregon's costs for creating and implementing a new program that incentivizes voluntary compliance. If the program qualifies for federal grants under the Section 319(h) program, at least a portion of these costs could be recouped by Oregon. This funding could make new policy innovation more attractive to Oregon.

V. CONCLUSION

Given the fact that Oregon is still susceptible to pressure to more aggressively protect its rivers from logging road discharges, the practical issues raised in *Decker* remain relevant.¹⁴⁴ Oregon's current system addresses road maintenance, but empirical evidence indicates that the system is insufficient to prevent sedimentation levels that have adverse impacts on streams.

Oregon might be able to protect itself from future attacks from environmental organizations and reconsideration of the issue by the EPA if the State creates a more effective system

141. See McElfish et al., *supra* note 14, at 112–28.

142. See *generally*, Suter et al., *supra* note 15.

143. U.S. ENVTL. PROT. AGENCY, *Process for Applying for 319(h) Funds*, WATER: POLLUTED RUNOFF, <http://water.epa.gov/polwaste/nps/319hfunds.cfm>. (last visited Nov. 23, 2013).

144. *Decker v. Nw. Env'tl. Def. Ctr.*, 568 U.S. __ (Mar. 20, 2013), 133 S. Ct. 1326, 1338 (2013).

for reducing logging road discharges.

While the Supreme Court's ruling in *Decker* was favorable to Oregon, it did not foreclose the possibility that the EPA could require NPDES permits for logging road discharges in the future.¹⁴⁵ Given industry concerns regarding cost and manageability, it is important to consider the mechanics of that system. Although operators would be responsible for the cost of the permit and potentially for noncompliance penalties, the program proposed by this Comment is not cost-prohibitive or overly burdensome because Oregon already has the necessary infrastructure, and permits would likely be issued by the state of Oregon rather than the EPA.

Oregon can also look to the example of a voluntary-threat system, in which operators may voluntarily comply, but are subject to a heavy penalty when water quality standards are not met. Such a program would be easier for Oregon to implement because it only requires monitoring the water quality of the two rivers, while operators may reduce the discharges in a manner that is most economically efficient for them. So long as the penalty for noncompliance is large enough, and correlated to the amount of excess pollution in the rivers, such a system should effectively reduce logging road discharges.

The basic elements of the theoretical model have been incorporated into slightly different systems. Oregon could follow the lead of these states and incorporate the principles into its own voluntary-threat system in order to achieve more efficient logging road discharge reduction.

The Supreme Court's decision did not fully resolve the practical issues in *Decker*.¹⁴⁶ Oregon prevailed in the case, but the state may still need to strengthen its logging road pollution reduction system to avoid further challenges. Because of the industry concern that new programs will be too costly and unmanageable, it will be important for Oregon to weigh these concerns against environmental costs and the costs of future litigation should it choose to modify its current system. These problems are not insurmountable, and using the example of theoretical models and the practical approaches of other states, Oregon can reduce pollution from logging road discharges

145. *Id.*

146. *Id.*

2013] ALTERNATIVES IN LIGHT OF *DECKER v NEDC* 319

efficiently.