

AN ABSTRACT OF THE THESIS OF

Amanda Marie Schenk Grisa for the degree of Master of Science in Sustainable Forest Management presented on December 8, 2014.

Title: Judicial Deference and Its Potential Effect on Agency Science and Natural Resource Management

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Kevin D. Boston

The USDA Forest Services' actions have come under greater scrutiny by a public that has become increasingly concerned with the legality of their actions. Often, challenges involve the quality of science used in the decision-making. Congress has mandated that the agency use the "best available science" in its decision making in various relevant environmental statutes and rules, like NEPA, ESA, NFMA, and its 2012 Forest Planning Rule. A question remains of how the judiciary will evaluate the use of science by the agency to analyze the impacts of its actions. The judiciary has developed various precedence to determine the appropriate level of deference, authorized by the APA§706, granted to the agency when determining the legality of these actions. An agency may be granted deference, or a yield judgment by the court, when analyzing its compliance with a rule or statute it administers. There are various types of deference that can be applied during the review of an agency action based on the type of action and the root of the claim, these include Chevron, Skidmore, Auer, and no deference. The judiciary has applied these precedence's that granted this deference to the Forest Service's actions inconsistently. Deference was high in the 1980s, but fell through the 1990s, and finally reaching an ultimate low in 2007. It is hypothesized that *Lands Council v. McNair*, 2008 (Lands Council III), a case focused on a project aimed at restoring the natural composition of the forest through various silvicultural techniques, has established *Stare Decisis* in that it returned a decision that established the judicial policy of agency review toward a standard of high deference. Through a case analysis of the methods of USDA Forest Service science and the reasoning of its use by the agency of 45 cases in the United States Court of Appeals for the Ninth Circuit, we have examined the importance of Lands Council III. This is seen in the realignment of the appellate and district court after the Lands Council III decision and the acceptance of the 2012 Forest Planning Rule, requiring a

higher level of “best available science” towards a high level of deference to the USDA Forest Service. This is in regard to the science used to satisfy the requirements of the relevant environmental statutes and rules. The previous inconsistencies in review over time of the USDA Forest Service in the appellate court, and from the district court to the appellate court, have resulted in a lapse in the nexus of the law and science to allow for effective natural resource management and policy. The future policy implications after the result of Lands Council III and the 2012 Forest Planning Rule and the various levels of deference granted to the agency by the court are many, and can have varying affects on the way we produce science and manage our natural resources.

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Judicial Deference and Its Potential Effect on Agency Science and Natural
Resource Management

by
Amanda Marie Schenk Grisa

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APPROVED:

Major Professor, representing Sustainable Forest Management

Head of the Department of Forest Engineering, Resources, and Management

Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Amanda Marie Schenk Grisa, Author

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Judicial Deference and Its Potential Effect on Agency Science and Natural Resource Management

INTRODUCTION:

In 2008, the Ninth Circuit Court of Appeals accepted a motion of *certiorari* to review the case *Lands Council v. McNair* (*Lands Council III*) *en banc*, to “clarify [their] jurisprudence with respect to our review of the actions of the United States Forest Service.” *Lands Council* had filed for a preliminary injunction to stop the project on the grounds that it violated the National Environmental Policy Act and the National Forest Management Act. This was denied by the District Court. *Lands Council* appealed, and the three panel Ninth Circuit Court held in favor of *Lands Council*. The *en banc* ruling overturned the Ninth Circuit opinion.

The case was focused on a project in the Mission Brush area of the Idaho Panhandle National Forest aimed at restoring the natural composition of the forest, accomplished with silvicultural techniques. This would result in millions of board feet generated and sold in three timber sales. To accomplish these goals, the USDA Forest Service was required to comply with the Idaho Panhandle National Forest Plan as required by the National Forest Management Act, which included standards for soil quality and provisions for wildlife viability, specifically of the flammulated owl, which was a species of concern in the forest plan. To satisfy those needs, the USDA Forest Service utilized a modeling soil analysis and habitat as proxy methods for owl population modeling.

In the appellate court these methods were deemed unreliable and unsatisfactory to accomplish the goals of the agency by the three-judge panel in the first Ninth Circuit decision. The Ninth Circuit, in the *en banc* decision overturned their previous decision and found that the USDA Forest Service acted within its expertise to satisfy the requirements of the Forest Plan as well as meeting the requirements for NEPA. Some have argued that this was a landmark decision to return the deference rightfully granted to the USDA Forest Service by the courts. Others have questioned whether this was an anomaly and that the science and agency decision are not being fully addressed by the courts.

USDA Forest Service actions have come under greater scrutiny by a public that has become increasingly concerned with the legality of their actions.¹ Often, challenges involve the quality of science used in decision-making. A question remains how the judiciary will evaluate the use of science by the agency to analyze the impacts of its actions. The judiciary has developed various precedencies to determine the appropriate level of deference granted to the agency when determining the legality of these actions. However, the judiciary has applied this precedence that granted deference to Forest Service actions inconsistently. Deference was high in the 1980s, but fell through the 1990s. The level of deference applied to the USDA Forest Service has been uncertain since the Lands Council III decision. It is hypothesized that *Lands Council v. McNair* (Lands Council III) has established *Stare Decisis* in that it returned a decision that established the judicial policy of agency review toward a standard of high deference.

This paper will begin by describing the various scientific standards in the legislation and regulations that govern the USDA Forest Service activities. This will include the Administrative Procedures Act, the National Environmental Policy Act, the Endangered Species Act, and the National Forest Management Act and the Forest Planning Rules promulgated by such an act. The types of deference, briefed in Table 1, granted by the courts when they interpret agency actions will then be described.

In the second section, I will analyze how judicial application of agency deference has shifted through environmental case law from the late 1980s up to the present by briefing selected cases pertinent to the USDA Forest Service and litigation involving the questioning of its scientific methods. In this analysis, I will determine how the district court and appellate court has viewed agency actions and if their actions have met the standards to grant deference. This will include determining the methods of the plan or action in question and how the agency and ultimately the court determined that plan or action as sufficient.

Finally, I will discuss how the high and low standards of judicial review can affect agency choice for its science and the impact on natural resource management it may have. This effect is the nexus of science and law to create policy. The possible future policy outcomes from the various ways a court can interpret agency actions and the levels of deference that can be applied are many and can have varying affects on the way we produce science and manage our natural resources.

¹Miner, Amanda, M.A. et. al. 2014. Twenty Years of Forest Service Land Management Litigation. *Journal of Forestry*. 112(1): 32-40, page 32.

These policy outcomes may include the following with consistent high deference rulings:

- If high levels of deference are granted to the agency by the court, the agency may be freer to perform “creative” science. This may include more adaptive management plans, new techniques, and the implementation of the most recent scientific protocols and theories.
- If high levels of deference are granted to the agency by the court, the agency may take on a blasé approach to the science they use in their management actions. This may include using older methods or methods that may be considered acceptable but outdated.

And may include the following with consistent low deference ruling:

- If low levels of deference are applied to the agency, the courts may take on the role of experts and become a “science court”. They may become the panel of “experts” and decide what is good or bad science with or without appropriate technical expertise.
- A low level of deference may force the agency to adopt a precautionary approach to management that would favor inaction until uncertainty of action be removed by accumulation of scientific support for an action and thus the no action alternative would be the selected one by default.
- The agency is on their “best behavior” and uses the most widely accepted methods.

Previous studies have synthesized the past twenty years of litigation of the USDA Forest Service.² Previous studies have also analyzed how deference has been applied to the USDA Forest Service in certain cases.³ Many researchers are now delving deeper into the connection of science, policy, and law, especially science related to natural resource management.⁴ To the best of our knowledge, no research has been integrated to include the history of USDA Forest Service litigation that compared the judicial deference applied to the agency actions, and how this affects the science used and the resulting policies created from these judicial actions.

² Miner, Amanda, M.A. et. al. 2014. This study analyzed USDA Forest Service litigation from 1989 to 2008. This analysis does not include cases that were completed after 2010. This analysis also does not look at the cases on an individual basis, but instead uses a population method to characterize cases by Forest Service win, Forest Service loss, and settlement.

³ Weldon, Ryan G. and Michael E. Patterson. 2010. Maintaining the Ninth Circuit’s Clarified Arbitrary and Capricious Standard of Review for Agency Science and Lands Council v. McNair. 31 Pub. Land & Resources L. Rev. 55, *55

⁴ K. Arabas, & J. Bowersox, *Forest Futures: Science, Politics, and policy for the Next Century* (pp. 127-142). Oxford: Rowman & Littlefield Publishers, Inc.

LITERATURE REVIEW:

Science in Natural Resources Law

Science and law are connected through specific environmental statutes. However, there is a significant variation in the scientific requirements mandated in the various acts that impact the USDA Forest Service activities.

Administrative Procedures Act

The Administrative Procedures Act of 1946 (APA) sets the process for how agencies create regulations and allows for judicial review, or the authority to review, of agency decisions. The APA also requires that the agency keep the public informed and allows for public comment in agency rule making.⁵ Overall the act provides for transparency in agency actions and a means to review these actions.

Under the APA, the judiciary is given the authority to review an agency's action.⁶ This occurs at all levels of the court. In review of an agency action, the higher court must determine the standard of review, or the amount of deference given to a decision, granted to the lower courts decisions. In the case of an appellate court reviewing a district court decision, the standard of review is the amount of deference that the higher court gives to the lower court.⁷ The appellate court will determine whether to look at the case anew, or *de novo* or take on a more deferential standard of review called "abuse of discretion", where a higher court determines if the lower court abused its will in forming its opinion.⁸

Section 706 of the APA establishes how the court can review agency action.⁹ This is the general requirement for all agency actions unless the specific statute differs. This standard of review applied by a court to an agency, is most commonly applied as the "arbitrary and capricious" standard.¹⁰ The arbitrary and capricious standard requires that the reviewing court determine if the agency considered all relevant information to the issue at hand and if they had

⁵ APA, 5 U.S.C. §500-706.

⁶ APA, 5 U.S.C. §706.

⁷ United States Courts for the Ninth Circuit. 2012. Standards of Review: Definitions. Obtained at http://cdn.ca9.uscourts.gov/datastore/uploads/guides/stand_of_review/I_Definitions.pdf

⁸ Id.

⁹ APA, 5 U.S.C. §706.

¹⁰ *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971).

made a “clear error in judgment”, or in other words, the agency did not ignore evidence pertinent to the problem, or its explanation is out of character with the problem or implausible.¹¹ The court will determine if the agency actions were unlawful, arbitrary and capricious, an abuse of discretion, contrary to constitutional rights, an abuse of power, in excess of statutory jurisdiction, without observance of procedure that is required by law, unsupported by evidence, and, or, unwarranted by the facts.¹² The court will look at the whole record or that which is cited by the parties to determine how the agency proceeded to determine if deference is granted, or the level of deference to be granted. For the USDA Forest Service, the National Forest Management Act and the National Environmental Policy Act are reviewed using §706 of the APA standard of review, while the components of Endangered Species Act, such as species listing, has its own means of enforcement.

Agencies are primarily created as an extension of the executive branch. Congress can delegate rulemaking to these agencies: for example the delegation of rulemaking to the USDA Forest Service under NFMA to allow the Forest Service to promulgate regulations necessary to administer the act. Through the separation of powers of the branches of the United States government, agencies, as an extension of the executive branch, are held accountable to act within their authority mandated by Congress, by the judicial branch.¹³ With this, agencies may be granted deference, or a yield in judgment by the court, when analyzing that its compliance with a rule or statute it administers. Courts also commonly look to an agency when reviewing scientific methodology and technology used in data collection to make decisions: for example the USDA’s decisions to use models versus a “boots on the ground method” when determining the impacts of timber salvage on species viability in a forest plan.¹⁴ Agency deference is not subject to congressional oversight. Congressional oversight occurs when the House and Senate review how effectively the executive branch is carrying out congressional mandates. This is a type of check and balance. The courts are granted this power to interpret an agency’s facts and procedures.

¹¹ These standards were established by the Supreme Court in *Motor Vehicle Mfrs. Assn. of U.S., Inc. v. St. Farm Mut. Automobile*, 463 U.S. 29 (1983).

¹² APA, 5 U.S.C. §706

¹³ Potter, Kristen. 2000. Judicial Review of Forest Service Decisions Made Pursuant to the National Forest Management Act’s Substantive Requirements: Time for a Science Court?. *Journal of the National Association of Administrative Law Judiciary*; 20(2): 241-262

¹⁴ *Lands Council v. Powell*, 379 F. 3d 738 (2004), amended *Lands Council v. Powell*, 395 F. 3d 1019 (2005).

National Environmental Policy Act

The purpose of the National Environmental Policy Act of 1969 (NEPA) is to ensure “harmony between man and his environment” by eliminating damage to the environment.¹⁵ Congress, under Title I of NEPA, intended that an interdisciplinary approach of natural and social science integration be used in a systematic way in environmental planning and decision making to reduce humans’ impact on the environment.¹⁶ Congress also intended that agencies and the Council on Environmental Quality (CEQ) would collaborate to utilize or create methods that will allow for full consideration of environmental values.¹⁷ NEPA ensures that public officials and citizens have access to information on how potential projects may affect the environment.

NEPA does not describe what techniques or scientific methodology an agency must use to determine the potential affects a project will have on the environment. The CEQ only requires that the information used in Environmental Assessments or Environmental Impact Statements are of “high quality” and consist of “accurate scientific analysis [and] expert agency comments”.¹⁸ It also does not mandate certain results, but rather acts as a means to ensure procedural requirements are met and transparency is achieved in a proposed agency action, as stated in *Marsh v. Oregon Natural Resources Council*:

¹⁵ NEPA, 42 U.S.C. § 4321

¹⁶ NEPA, 42 U.S.C. §4332 (2)(A).

¹⁷ NEPA, 42 U.S.C. §4332 (2)(B). The Council on Environmental Quality (CEQ), created under Title II of the National Environmental Policy Act, serves to report to the President of the United States and “Each member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds; to appraise programs and activities of the Federal Government in the light of the policy set forth in title I of this Act; to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.”(42 U.S.C. 4343. Sec 202). The CEQ must also “(1) to assist and advise the President in the preparation of the Environmental Quality Report...(2) to gather timely and authoritative information concerning the conditions and trends in the quality of the environment...(3) to review and appraise the various programs and activities of the Federal Government...(4) to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the Nation;(5) to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality; (6) to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes; (7) to report at least once each year to the President on the state and condition of the environment; and (8) to make and furnish such studies, reports, thereon, and recommendations with respect to matters of policy and legislation as the President may request.” (42 U.S.C. 4343. Sec 204).

¹⁸ 40 C.F.R. § 1500.1(b) (2008).

“NEPA does not work by mandating that agencies achieve particular substantive environmental results. Rather, NEPA promotes its sweeping commitment to "prevent or eliminate damage to the environment and biosphere" by focusing Government and public attention on the environmental effects of proposed agency action. 42 U. S. C. § 4321. By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct. See *Robertson, ante*, at 349. Similarly, the broad dissemination of information mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time. *Ante*, at 349-350.”¹⁹

Thus, when a court reviews the compliance of the agency and fulfillment of NEPA, it looks only to see if that agency has taken a “hard look” at the information at hand and the potential outcomes of its action²⁰, through the completion of an Environmental Assessment or an Environmental Impact Statement²¹. Sufficient rational for an agency’s decision making in the NEPA process will most likely fulfill the review standard.²²

The USDA Forest Service NEPA procedures outline how to create a thorough analysis for the Environmental Assessment (EA) or Environmental Impact Statement (EIS). The statutory language does not include the terms “best science” to perform environmental analyses, but it does mandate that all agencies preparing NEPA documents including the USDA Forest Service must choose the most currently available methods to perform the analysis and be able to justify their decisions.²³

A framework for the environmental analysis is then developed for the specific project. The USDA Forest Service agency leader will “[i]dentify and select data sources, analysis methods, and set standards of accuracy”, this may include determining the current available data and what data need to be collected.²⁴ The agency must describe why that specific analysis is performed in the framework for analysis. The NEPA document must also include a definition of the “standards of accuracy commensurate to the acceptable level of risk and to the availability of qualitative and quantitative data [and in this framework for analysis] [d]escribe the relationship between risk and accuracy.”²⁵ The development of the framework analysis determines and

¹⁹ *Marsh v. Oregon Natural Resources Council* (1989) at 371.

²⁰ *Id.* at 368.

²¹ 42 U.S.C. §4332(2)(C).

²² Clarke, Sara A. 2009. “Taking a Hard Look at Agency Science: Can the Courts Ever Succeed?” *Ecology Law Quarterly*, 36: 317-355, Pg. 328.

²³ FSH 1909.15-2012-3(12.3).

²⁴ *Id.* 12.3 (1).

²⁵ *Id.* 12.3 (4).

clarifies the what, why, when, who, and how of the environmental analysis. This framework also determines the science and methods that will be used in the project and the reasoning behind that choice.

The Endangered Species Act

The Endangered Species Act of 1973, (ESA), as mandated by the United States Congress, requires the United States Fish and Wildlife Service or the National Marine Fisheries Service to use the best science in making many of its decision surrounding the list and designation of critical habitat. The ESA requires that the Secretary of Interior or Commerce will make listing determinations based on the “best scientific and commercial data available to him after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or the high seas.”²⁶ The ESA requires that the Secretary will designate critical habitat “on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular habitat as critical habitat.”²⁷ This language ensures that the United States Fish and Wildlife Service is making well-informed decisions based on the best science available to them.

The National Forest Management Act

The National Forest Management Act of 1976 (NFMA) relegates the power of managing our National Forest System to the USDA Forest Service.²⁸ It has granted the agency the authority to promulgate rules to create and describe the technical details for forest management. The most recent 2012 Forest Planning Rules defines the processes that the agency must use to prepare its forest plans, including the need to maintain species population viability in forest plan regions.

²⁶ ESA, 16 U.S.C. §1533 (b)(1)(A).

²⁷ ESA, 16 U.S.C. §1533 (b)(2). Critical habitat for threatened or endangered species is defined by the geographic area as species occupies or areas around that occupation when it is listed, in accordance with ESA§4. These areas are critical to the conservation of said species and may require special management plans to attain conservation. Critical habitat does not include every or all-geographic areas a threatened or endangered species may occupy as defined by ESA§3(5).

²⁸ NFMA, 16 USC §1600. NFMA amended the Forest and Rangeland Renewable Resources Planning Act of 1974.

The National Forest Management Act creates a tiered approach to forest planning. At the first tier, national regulations set the base for which the second tier plans are developed. At the second tier, the Forest Service planners create a forest unit plan, or a land resource management plan, LRMP. This plan is aimed at defining the goals and objectives for the activities that occur in the unit and to create a framework for future decision making in the unit.²⁹ The plan is a mere guideline for agency officials; it does not authorize the Forest Service to implement projects and is not subject to NEPA.³⁰ The third tier of the NFMA is where site-specific projects may be implemented, and which must be consistent with the overarching forest unit plan.

The Forest Planning Rules:

There have been various renditions of forest planning rules. Most forest plans were prepared using the 1982 Forest Planning Rule. Under the 1982 Forest Planning Rule, the agency was required to use the best available data in the planning process.³¹ The 1982 rule expanded the diversity requirement in the statute and required that the USDA Forest Service ensure “Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.”³² It did not define viability such as the length of time or probability of persistence in its rule. But, this specifically required that the agency maintain the minimum required habitat for these species.³³ Habitat has often been used a proxy to determine species viability numbers.

The 2012 Forest Planning Rule requires the USDA Forest Service to only use the “best available scientific information”, defined by what is most accurate, reliable, and relevant, when

²⁹ 36 C.F.R. §219.2(b)(1).

³⁰ *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726, 732 (1998).

³¹ 36 C.F.R. § 219.12(d). The best available data was described as “This may require that special inventories or studies be prepared. The interdisciplinary team shall collect, assemble, and use data, maps, graphic material, and explanatory aids, of a kind, character, and quality, and to the detail appropriate for the management decisions to be made. Data and information needs may vary as planning problems develop from identification of public issues, management concerns, and resource use and development opportunities. Data shall be stored for ready retrieval and comparison and periodically shall be evaluated for accuracy and effectiveness. The interdisciplinary team will use common data definitions and standards established by the Chief of the Forest Service to assure uniformity of information between all planning levels. As information is recorded, it shall be applied in any subsequent planning process. Information developed according to common data definitions and standards shall be used in the preparation of the 1990, and subsequent RPA Assessments and RPA Programs.”

³² 36 C.F.R. § 219.19

³³ *Id.*

creating management plans for the countries National Forests.³⁴ The planning process performed by the USDA Forest Service includes three phases involving 1) Assessments, informed by the “best available scientific information”³⁵, 2) Development, amendment, and revision of a plan, and 3) Monitoring.³⁶ The 2012 Forest Planning Rule monitoring program allows for the agency to review its monitoring report on a biennial schedule to determine if there is new information, which can be incorporated into future planning documents.³⁷ As of March 2013, an additional step allowing for project level pre-administrative review of proposed projects is applicable to forest related activities that require an Environmental Assessment or Environmental Impact Statement under the National Environmental Protection Act, 1969, within the planning process under 36 C.F.R. §218.³⁸

The “best available science” and its role in the NFMA 2012 Forest Planning Rule are clearly stated in the regulations, although there is no language specific to the methodology required in the federal code. The 2012 rule also brings back a modification of the 1982 species viability order. This aspect of the new rule may be of the most important for the legislation in regard to the many legal challenges of the methodologies the agency takes to fulfill its requirements.³⁹

The NFMA statute outlines that the USDA Forest Service must:

“[p]rovide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan;”⁴⁰

³⁴ 36 C.F.R. §219.3.

³⁵ 36 C.F.R. §219.6.

³⁶ 36 C.F.R. §219.5.

³⁷ 36 C.F.R. § 219.12(d).

³⁸ USDA Forest Service. March 27th 2013 the Healthy Forest Restoration Act, HFRA of 2003, 36 C.F.R. §218 was revised to implement the project-level pre-administrative appeals process, also known as the objection process. This revision was aimed at allowing for a most inclusive transparent process for forest planning and project planning. Now public concerns are taken into consideration before a final decision is made on a project rather than when a project is approved under the administrative appeals process under 36 C.F.R. § 215. Retrieved from http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5442116.pdf

³⁹ These include *Inland Empire Public Lands Council v. United States Forest Service*, 88 F. 3d 754 (1996) and *Lands Council v. McNair*, 537 F. 3d 981 (2008).

⁴⁰ NFMA, 16 U.S.C. §1604 (g) (3) (B).

The 2012 Forest Planning Rule requires the USDA Forest Service to provide for diversity of plant and animal communities in each land resource management plan (LRMP).⁴¹ This includes maintaining or restoring the “structure, function, composition, and connectivity” of the ecosystems, both aquatic and terrestrial in the LRMP.⁴² The rules then designate species-specific plan processes to be included under the analyzing the effects of forest management activities on the diversity of plant and animal communities mandate.

The species-specific plan component states that each plan must “maintain a viable population of each species of conservation concern within the plan area.”⁴³ The species-specific component is designed to complement the ecosystem integrity component when providing for plant and animal diversity in the rule. A coarse-filter and fine-filter approach will be used by the agency; with the coarse filter accomplished by the ecosystem integrity and diversity requirements and the fine filter accomplished with the species specific viability requirements. Thus, the rule specifies an existing scientific method to be used. The coarse filter is aimed at creating ecosystem conditions that support the abundance, persistence, and distribution of native species throughout the land areas in the management plans.⁴⁴ The fine filter then acts as a “safety net” for sensitive species or those of conservation concern (the species ability for long-term persistence is in question) in the management area, whose habitat needs may not be fulfilled by the ecosystem integrity requirements.⁴⁵ Proponents of the coarse-filter and fine-filter method state that the method is one with proven results and supported by over three decades of scientific literature and research.⁴⁶ This would coincide with the emphasis on the use of the best available science written in the rule.⁴⁷

⁴¹ 36 C.F.R. §219.9.

⁴² Id. at (a)(1).

⁴³ Id. at (b)(1).

⁴⁴ 77 F.R. 21175.

⁴⁵ Id.

⁴⁶ Id. The Federal Register discussion cites the restoration of longleaf pine in the south aiding in the recovery of the red-cockaded woodpecker, with the coarse-filter being the longleaf pine restoration and fine-filter of the woodpecker. Salmon population recovery is also cited due to watershed focus in plans as a coarse-filter.

⁴⁷ The Federal Register discussion of the species viability clause also points out the marker of what best available science is and the standard of time in scientific literature and research a method or concept may need to be to be considered “best available science”.

The 2012 species viability component is different from the 1982 component in that the 2012 rule recognizes that there are limits to the success of the plan in maintaining viable species populations for species of concern. The 1982 rule had set a hard line requirement that all native species would need to be provided adequate habitat to allow for viable populations.⁴⁸ This rule did not provide exceptions for circumstances that are out of the control of the agency. The 2012 rule is written to be more focused, and thus more efficient, by only requiring the agency to provide viable populations for species of conservation concern. Efficiency of the new rule is recognized in the provisions of monitoring of focal species rather than the monitoring of management indicator species (MIS), as required in the 1982 rule.⁴⁹ The 1982 rule relied on MIS, as the science of the day favored this approach, to reveal the effects of management activities on the broader set of species in the forest unit.⁵⁰ The MIS were most commonly monitored by assessing the amount of adequate habitat that was present in the forest unit for that species.⁵¹ This method was known as the “habitat as proxy method”. The 2012 rule now “[a]llows the use of any existing or emerging approaches for monitoring the status of focal species that are supported by current science.” for the monitoring of focal species population trends.⁵² The monitoring on the coarse-filter and fine-filter approach is aimed at allowing for up to date information to determine the effectiveness of the Land Resource Management Plans (LRMP’s).

The Best Available Science

The statutes or regulations previously discussed all include some aspect of “best available science” or language on making fully informed, accurate decisions including natural and social science, but the statutes do not include specific methodological based language. Science is defined as the state of knowing, a department of systematized knowledge, as a system of knowledge covering general truths or the operation of general laws especially as obtained and

⁴⁸ 36 C.F.R. §219.27(a)(6).

⁴⁹ 77 F.R. 21175. Focal species have been defined in the literature, as stated in Schultz, et al., as those that display keystone functions, they are sensitive to environmental stressors, and are important in food web dynamics and ecological processes.

⁵⁰ Schultz et al. 2012. Wildlife Conservation Planning Under the United States Forest Service’s 2012 Planning Rule. *The Journal of Wildlife Management*. 1-17.

⁵¹ This practice became known as the “habitat as proxy method” to determine population viability in a forest unit. The method was found acceptable in 1996 in *Inland Empire Public Lands Council v. USFS* and late challenged and deemed unreliable in *Lands Council v. Powell*, 379 F. 3d 738 (2004), amended *Lands Council v. Powell*, 395 F. 3d 1019 (2005).

⁵² 77 F.R. 21176.

tested through the scientific method.⁵³ The scientific method requires a researcher, to think critically to ask a question, moving through the various steps of observations, formulating a hypothesis and making a prediction, to developing a protocol and testing that protocol, which produces results that can be tested again. The method creates a structure for which researchers can come to a conclusion. The conclusion and process is generally published and then can be repeatedly tested by other researchers to test the dependability of the protocol and the conclusions. This process results in reliability of methods and in essence, the most valid of methods and conclusions.

Best is defined as better than all others in quality or value, the most appropriate, useful, or helpful.⁵⁴ Science is evaluated through peer review and repetition of methods to produce results, but best science may not mean the same to all those who create, utilize, or follow it. When we evaluate best science in forestry and natural resource management, we must consider what the most widely accepted and used methods are, but also what the newest methods used through adaptive management techniques and innovative technologies are to determine what the best science is. The evaluation of the science to determine what is the best available is not always objective. It requires an expertise and extensive knowledge of the subject to be able to determine best available science. This can also lead us to look to the future of science. Our practice of current methods, adaptive management, and natural inquiry can lead to new theories and scientific methods.

When determining what the best available science is when creating and carrying out LRMP's science and policy questions need to be dissected to determine what the "best" scientific methods are to reach a conclusion. Policy questions are those that are mostly value driven, while science questions are those that are information driven. Policy decisions can be those focused on economic value of a decision, or those focused on the cultural value of a decision, while science decisions can be those based on environmental impacts of a management plan.⁵⁵ Making the distinction between policy and science driving factors to our questions is important because they each can influence one another. This is evident throughout the history of the USDA Forest Service from its focus on timber products, and timber based management techniques to more

⁵³ Merriam-Webster definition of "Science".

⁵⁴ Merriam-Webster definition of "Best".

⁵⁵ Pouyat et al., 2010. The role of federal agencies in the application of scientific knowledge. *Front Ecol Environ*; 8(6): 322–328.

recent, wilderness based forest management science caused by shifting paradigms.⁵⁶

Types of Deference:

There are various types of deference applied by the judiciary to agency actions beyond the arbitrary and capricious standard of deference created by APA §706; this includes Chevron, Skidmore, and Seminole Rock or Auer deference, and no deference regime. Deference applies to agency action in either rulemaking or their interpretations. The type of deference applied by the court will be unique to the situation.

Chevron Deference

The Supreme Court case, *Chevron, USA, Inc. v Natural Resources Defense Council*, 467 U.S. 837, 842-45 (1984) established a two-part test for the court granting agency deference, known as Chevron deference. The commonly referred to judicial test is applied when a controversy surrounds an agency interpretation of a statute that Congress has specifically authorized the agency to administer, such as the USDA Forest Service interpreting the National Forest Management Act.

The case arose out of a facial challenge of the 1977 amendments of the Clean Air Act (CAA) to the Environmental Protection Agency (EPA) over the definition of a “statutory source” at the Court of Appeals in the District of Columbia.⁵⁷ Justice Stevens delivered the majority opinion of the Court, where he stated:

“If Congress has explicitly left a gap for the agency to fill, there is an express delegation of authority to elucidate a specific provision of the statute by regulation. Such legislative regulations are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute. Sometimes the legislative delegation to an agency on a particular question is implicit rather than explicit. In such a case, a court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.”⁵⁸

This created the two-step Chevron test. The first step asks if Congress “has directly spoken to the precise question at issue”⁵⁹, if yes, then Congress was clear in its intent and there

⁵⁶ Magee, Jerry. 2009. Legal Implications in Forest Management Science in National Environmental Policy Act Analysis. *Vermont Journal of Environmental Law* 10: 213-228.

⁵⁷ *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984).

⁵⁸ *Id.* at 844.

⁵⁹ *Id.* at 843.

is no further action, deference is not granted to the agency and it must act as Congress has required in the act. If Congress was not clear in its intent, then the Court is not able to interpret the reasoning of Congress; thus, the second step of the test is initiated. The Court will look at the agency's interpretation to determine if it is unreasonable, arbitrary and capricious, or an abuse of discretion. If the agency acted unreasonably then deference is not granted to the agency. If the agency's interpretation of the statute is reasonable and it followed procedure, then the agency has passed both steps of the test and the court can defer to the agency's interpretations.

It is important to note again that Chevron deference is only awarded when Congress has delegated the power to interpret the statute to that agency specifically. Another example, the EPA has Chevron deference over aspects of the Clean Air Act not the Forest Service.

Skidmore Deference

Skidmore, also known as Lesser deference, born out of the 1944 Supreme Court case, *Skidmore v. Swift & Co.*, 323 U.S. 134, is known as the "all things considered" approach.⁶⁰ Skidmore deference is applied in cases where the interpretations of the agency can create a "body of experience" that the courts can concede to for direction, but does not control the rulings of the court. The majority opinion by Justice Jackson states:

"We consider that the rulings, interpretations, and opinions of the Administrator under this Act, while not controlling upon the courts by reason of their authority, do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance. The weight of such a judgment in a particular case will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control."⁶¹

This discretion is usually in reference to non-legislative rules. The court can include the agency's findings in its decision but they are not binding on the court.⁶² It is determined that in situations where Chevron deference is not applicable, then Skidmore deference is most often

⁶⁰ Eskridge, Jr., William N. & Lauren E. Baer. 2008. The Continuum of Deference: Supreme Court Treatment of Agency Statutory Interpretations from *Chevron* to *Hamdan*. The Georgetown Law Journal. 96: 1083-1141.

⁶¹ *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944) at 140.

⁶² Yavelberg, Jamie A. 1992. The Revival of *Skidmore v. Swift*: Judicial Deference to Agency Interpretations after *EEOC v. Armco*. Duke Law Journal 167, 42: 166-202.

applied.⁶³ For example, a court would implement Skidmore deference when the agency comments on the environmental impact statement in NEPA decisions. CEQ is the only agency charged with the administration of the NEPA; thus, other agencies would not be granted Chevron deference in review of compliance of the statute. The agency has the knowledge pertinent to the area and its characteristics, as well as the science involved, when completing environmental assessments or environmental impact statements, but they were not specifically granted authorization of the statute by Congress.

United States v. Mead, 533 U.S. 218 (2001) questioned whether the standard of Chevron deference or Skidmore deference applied in the case of the reclassification of Mead Corporation notebooks and other products from the tariff schedule from duty free to a 4% tariff in 1993.⁶⁴ The majority opinion describes in this case that the Customs agency was not specifically delegated the power to interpret the statute, and thus is not deserving of Chevron deference⁶⁵, but is still deserving of some deference, Skidmore deference, because it has the specialized experience and knowledge.⁶⁶ Mead refined Chevron deference in a manner where Congress was not ambiguous in its language, but explicit in defined its delegation of authority to an agency, and setting the standard, that when it has not explicitly defined authority, that Skidmore deference be applied.⁶⁷

Seminole Rock/Auer Deference

Seminole Rock deference, also known as Auer deference by the more recent 1997 *Auer v. Robbins* case⁶⁸, was born out of the 1945 case *Bowles v. Seminole Rock & Sand Co.*⁶⁹ The majority opinion delivered by Justice Murphy states,

“The intention of Congress or the principles of the Constitution in some situations may be relevant in the first instance in choosing between various constructions. But the ultimate criterion is the administrative interpretation, which becomes of controlling weight unless it is plainly erroneous or inconsistent with the regulation. The legality of the result reached by this process, of course, is quite a different matter. In this case, the only problem is to discover the meaning of

⁶³ This standard was established in *United States v. Mead*, 533 U.S. 218 (2001).

⁶⁴ *United States v. Mead*, 533 U.S. 218 (2001).

⁶⁵ *Id.* at 119 and 220.

⁶⁶ *Id.* at 220.

⁶⁷ Vermule, A. 2003. Mead in the Trenches. Chicago Public Law and Legal Theory Working Paper No. 37.

⁶⁸ *Auer v. Robbins*, 519 US 452 63 (1997).

⁶⁹ *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410 (1945).

certain portions of Maximum Price Regulation No. 188. Our only tools, therefore, are the plain words of the regulation and any relevant interpretations of the Administrator.”⁷⁰

Seminole Rock/Auer deference is implemented when an agency interprets its own rules and applies when Congress has delegated the power to the agency to promulgate regulations. In *Auer v. Robbins*, sergeants and lieutenants (including Auer) in the St. Louis Police Department sued the police commissioner for working overtime without pay, a violation of the Fair Labor Standards Act of 1938.⁷¹ Robbins argued that the petitioners were exempt from this rule due to their salary status and cited the Departments Manual. All justices found that the petitioners were indeed exempt and affirmed the lower court’s decision and rejected Auer and petitioner’s claim. The Court looked to the Department, Robbins, to interpret its manual because:

“the salary basis test is a creature of the Secretary's own regulations, his interpretation of it is, under our jurisprudence, controlling unless " `plainly erroneous or inconsistent with the regulation.' ". That deferential standard is easily met here.”⁷².

The Court deferred to the commissioner and the Department Manual, as it was not outrageous or unreasonable.

This was recently seen in the interpretation of the stormwater rule promulgated by the Environmental Protection Agency under the Clean Water Act, applied in *NEDC v. Brown*.⁷³ The plaintiffs, Northwest Environmental Defense Center (NEDC), filed a complaint in the Oregon District Court calling for declaratory and injunctive relief of logging activity.⁷⁴ The NEDC believed that the defendants, Marvin Brown, the acting Oregon State Forester, the members of the Oregon Board of Forestry, and four timber companies, were discharging pollutants (industrial storm-water) from logging roads in the Tillamook State Forest.⁷⁵ NEDC claimed this was a violation of the Clean Water Act (CWA) because National Pollutant Discharge Elimination System, NPDES, permits were not obtained. In 2007 the District Court dismissed NEDC’s case and held that the storm water directed through ditches, culverts, and channels from logging roads

⁷⁰ *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410 (1945) at 414.

⁷¹ *Auer v. Robbins*, 519 US 452 63 (1997).

⁷² *Id.* at 461 Citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989) and quoting *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945).

⁷³ *NEDC v. Brown* 640 F. 3d 1063 (9th Cir, 2011).

⁷⁴ *NEDC v. Brown*, 617 F.3d 1176, 1179 (2010).

⁷⁵*Id.* at 1180.

is not point source pollution so there is no violation of the CWA because the discharge related to logging activity was exempt from the CWA provisions under the EPA's Silvicultural Rule.⁷⁶

In 2010, the NEDC appealed to the U.S. Court of Appeals for the Ninth Circuit. The Court of Appeals reversed the District Courts decision, and ruled that logging road runoff is under regulation of the CWA.⁷⁷ The Ninth Circuit held that the Silvicultural Rule, a regulatory definition, allows the opposite of what the Clean Water Act statutes define as a point source, thus the storm-water discharge collected and channeled through ditches and culverts from logging roads is considered a point source pollutant and requires a NPDES permit.⁷⁸ The U.S. Supreme Court took the case and reversed the Ninth Circuits decision. This finally ruled that runoff from logging roads is not a point source, and does not need a NPDES permit under the CWA.⁷⁹

Justice Scalia discussed Auer deference in the dissent of the Supreme Court decision. In clarification of Auer and its validity, "Enough is enough" :

"Another conceivable justification for *Auer* deference, though not one that is to be found in our cases, is this: If it is reasonable to defer to agencies regarding the meaning of statutes that *Congress* enacted, as we do per *Chevron*, it is *a fortiori* reasonable to defer to them regarding the meaning of regulations *that they themselves crafted*. To give an agency less control over the meaning of its own regulations than it has over the meaning of a congressionally enacted statute seems quite odd. But it is not odd at all. The theory of *Chevron* (take it or leave it) is that when Congress gives an agency authority to administer a statute, including authority to issue interpretive regulations, it implicitly accords the agency a degree of discretion, which the courts must respect, regarding the meaning of the statute. *While the implication of an agency power to clarify the statute is reasonable enough, there is surely no congressional implication that the agency can resolve ambiguities in its own regulations. For that would violate a fundamental principle of separation of powers — that the power to write a law and the power to interpret it cannot rest in the same hands.*" [Citations Omitted; *Emphasis added*].⁸⁰

Thus, according to Justice Scalia, Auer deference gives too much power to the agency to both craft and interpret the regulation as needed.

No Deference

In many cases, no deference regime is applied. This is also known as the "independent judgment of judges" method. The court uses their own interpretation to determine the outcomes

⁷⁶ Id. at 1079.

⁷⁷ Id. at 1198.

⁷⁸ Id. at 1197.

⁷⁹ *Decker v. NEDC*, 133 S.Ct. 1326 (2013).

⁸⁰ Id. at 1340-1341.

of the case, and thus no deference is applied. As no deference is applied to a decision, the Judges only use the statute and past court decisions to determine the correct course of action.

Table 1: A Summary of the five types of deference to be discussed including their regulation and an example of their use.

Types of Deference	Regulation	Example
Chevron	Chevron deference is applied to agency decisions when Congress has authorized the agency to administer the law. The court uses a two-step test to determine if the agency acted reasonably.	USDA Forest Service interprets NFMA.
Skidmore	Skidmore deference is applied in cases where the interpretations of the agency can create a “body of experience” that the courts can concede to for direction, but does not control the rulings of the court. The court can include the agency’s decisions in its decision but the agency’s interpretations are not binding on the court.	USDA Forest Service interprets NEPA.
Auer	Auer deference is applied when an agency interprets its own rules. If the agency has included a reasonable interpretation of its own rule, the court will defer to that interpretation of the rule.	USDA Forest Service interprets the Forest Planning Rules.
No deference	In many cases, no deference regime is applied. This is also known as the “independent judgment of judges” method.	

USDA FOREST SERVICE CASE LAW ANALYSIS:

Our research has shown that the application of agency deference granted by the courts to forest service projects has been inconsistent. We have seen the Court, specifically the Ninth Circuit Court of Appeals, bounce from high to low deference granted to the USDA Forest Service. Within each standard of deference, most notably, that authorized under the APA, arbitrary and capricious standard, is flexible in how it is applied.

Forty-five cases were reviewed that involved the USDA Forest Service on challenges of compliance with NEPA, NFMA, ESA, or the APA based on agency science within the Ninth Circuit Court of Appeals. It was seen that in most cases, only the standard of arbitrary and capricious deference was officially recognized, with Auer Deference or Skidmore Deference informally recognized.⁸¹

Table 2: On an analysis of 45 cases within the Ninth Circuit Court of Appeals, about half of the cases resulted in the appellate court affirming the district court decision granting deference to the USDA Forest Service and about a third of the cases resulted in the appellate court reversing the district court holding, with a lower deference applied to the USDA Forest Service. In about 60 percent of cases, the appellate court held a high standard of deference.

District Court decision reversed in the Appellate Court resulting in USDA Win (Assumed Low deference granted to agency in D.C.)	District Court decision affirmed in the Appellate Court, resulting in USDA Win (Assumed High deference granted to agency in both courts)	District Court decision reversed in the Appellate Court, resulting in the Plaintiffs Win (Assumed Low deference to the agency in the A.C.)	District Court decision affirmed by the Appellate Court, resulting in the Plaintiff's Win (Assumed Low deference to the agency in both courts)	District Court decision either Reversed/Affirmed the Appellate Court decision, resulting in no clear winner (unable to assume deference)
6	21	15	1	2

Overall it appears that the appellate court and district courts generally defer to the agency. Table A.1 looks at these cases more in depth on an individual basis. The cases described below are representative of the types of analysis in regard to the science and methodology used by the courts and the deference that they apply to the agency. These are organized by Pre-Lands Council cases, the Lands Council trilogy including *Ecology Center v. Austin*, and cases following Lands Council.

Pre-Lands Council Cases:

Sierra Club v. Mariata

In 1994, The Sierra Club challenged the forest plan for the Chequamegon National Forest in Wisconsin for the violation of NFMA and NEPA, *Sierra Club v Mariata* (845 F. Supp 1317, 1994). The same year, the Sierra Club also challenged the forest plan for the Nicolet National

⁸¹ Only *Pacific Rivers Council v. Thomas*, 30 F.3d 1050 (1994) formally cites Chevron Deference.

Forest in Wisconsin for the violation of NFMA and NEPA, *Sierra Club v. Mariata* (843 F. Supp. 1526, 1994). These cases were jointly appealed in the case *Sierra Club v. Marita* (“*Marita II*”) 46 F. 3d 606, 619-20 (7th Cir. 1995).⁸²

The base of the plaintiff’s claim was their failure to incorporate the most current thinking on ecological sciences from conservation biology.⁸³ The Sierra Club argued that the diversity requirements of NFMA and the Forest Planning Rule, as well as NEPA, required the USDA Forest Service to use certain principles of conservation biology in the forest plan. Sierra Club stated that those principles, “dictate that diversity is not comprehensible solely through analysis of the numbers of plants and animals and the variety of species in a given area. Rather, diversity also requires an understanding of the relationships between differing landscape patterns and among various habitats.”⁸⁴ The Forest Service replied that the incorporation of island biogeography is legitimate, but found conflicting scientific evidence regarding the necessity of providing large areas of old-growth habitat.⁸⁵

The appellate court used the regulatory history in its decision when its committee of scientists that reviewed the regulations determined that the regulations should not specify any particular manner for providing for biological diversity. Ultimately, the appellate court did not find the method irrational, stating “Thus, while the Sierra Club did have standing to challenge the choices made by the Service, the Service made those choices within the boundaries of the applicable statutes and regulations. For the foregoing reasons, we affirm the decisions of the district court.” finding in support of the USDA Forest Service.⁸⁶

Inland Empire Public Lands Council v. United States Forest Service

In 1996, the Ninth Circuit United States Court of Appeals affirmed the district court decision that the USDA Forest Service’s EIS for the eight timber sales was sufficient in *Inland Empire Public Lands Council v. United States Forest Service*.⁸⁷ The Inland Empire Public Lands

⁸² *Sierra Club v. Marita* (“*Marita II*”) 46 F. 3d 606, 619-20 (7th Cir. 1995)

⁸³ *Id.* at 610.

⁸⁴ *Id.* at 617.

⁸⁵ *Id.* at 618 and 619.

⁸⁶ *Id.* at 624.

⁸⁷ *Inland Empire Public Lands Council v. United States Forest Service*, 88 F. 3d 754 (1996).

Council, plaintiffs, had challenged the timber sales in the Upper Sunday Creek Watershed region of the forest, alleging that the impact analysis for seven species deemed as “sensitive species” in the region was inadequate and violated NEPA and NFMA.⁸⁸ On appeal, the plaintiffs specifically argued that the USDA Forest Service failed to meet the minimum requirements of the population viability analysis, as required by 36 C.F.R. §219.19 and had violated NEPA because the viability analysis performed only focused on populations within the boundaries of the timber sale and thus a fully informed decision was not made and the hard look not taken.⁸⁹

“Because neither party disputes the Service’s ultimate obligation to ensure viable populations, the key to this appeal is deciding what type of population viability analysis the Service must perform in order to comply with Regulation 219.19.”⁹⁰ The Forest Service performed their habitat viability analysis on four sensitive species in the timber sale area, the *Picoides arcticus*, black-backed woodpecker, *Lynx canadensis*, Canada lynx, *Martes pennanti*, fisher, and *Aegolius funereus*, boreal owl. For each species they determined how much habitat in acres was needed for each species and what percentage of that territory was needed for reproductive behavior through consulting previously performed field studies.⁹¹ The Forest Service then determined how much territory would be left for each species in each timber sale alternative and decided that if the species habitat availability were at or above the designated threshold, the population would be viable.⁹² The plaintiffs argue that the Forest Service’s analysis did not meet the minimum requirements stated in Regulation 219.19.⁹³

The appellate court reviewed the USDA Forest Service’s methodology and interpretation of its own rules using the arbitrary and capricious standard defined in APA.⁹⁴ The Court cited various other decisions, included *Oregon Natural Resources Council v. Marsh*, 52 F.3d 1485,

⁸⁸ Id. at 757.

⁸⁹ Id. at 757. Note that the population viability analysis is focused on the 1982 Forest Planning rule, which states that the Forest Service must “provide for diversity of plant and animal communities.” 16 U.S.C. §1604(g)(3)(B).

⁹⁰ Id. at 759, II. Population Viability Analysis.

⁹¹ Example given for the lynx: The lynx needs 200 acres of territory, of which 20 acres is for denning needs, thus in total, the lynx would need 10% of its total territory to meet denning needs.

⁹² Id. at 760.

⁹³ Id. at 760. They contend that the regulation states that the habitat viability analysis requires that the population of each species be examined, the population dynamics be examined, and the species linkages are determined outside of the plan area.

⁹⁴ Id at 760. Following the arbitrary and capricious standard of review in 5 U.S.C. § 706(2)(A).

1488 (9th Cir. 1995), *Inland Empire Public Lands Council v. Schultz*, 992 F.2d 977, 981 (9th Cir. 1993), and *Sierra Club v. Marita ("Marita II")*, 46 F. 3d 606, 619-20 (7th Cir. 1995) to determine the standard of deference in regard to the agency's methodology they deemed fit to meet their own regulations.

The Court determined that the USDA Forest Service's habitat viability analysis was not arbitrary and capricious because its methodology concluded the amount of habitat that would be adequate to maintain the species and thus provide for a species survival in the affected areas. The Court stated "We believe that an analysis that uses all the scientific data currently available is a sound one.... We therefore find no fault with the Service's analysis..."⁹⁵ The Court also found that the USDA Forest Service did indeed follow its duty for management indicator species with its choice for the pileated woodpecker as its indicator species for the effects of the timber sale on old-growth habitat and the species that use that habitat.

The Court's decision on the plaintiff's argument that the Forest Service did not follow its NEPA duty to determine the timber sales effect on species adjacent to the project area, the cumulative effect, followed the standard of whether the agency took a "hard look" at the environmental outcomes of the project.⁹⁶ The Court rejected this claim by the Plaintiffs. It determined that the Plaintiffs had used the improper reading of the requirements of NEPA to determine indirect, direct, and cumulative impacts of a project, in that determining species population outside of the project area is not a cumulative impact.

The Court deferred to the agency in the arbitrary and capricious standard, notably also under the Auer standard of deference in regard to NFMA, and Skidmore standard of deference in regard to NEPA. The Court exhibited the high standard of deference to the Forest Service's actions, in their choice of methodology to determine population viability by using "habitat as a proxy".

⁹⁵ Id. at 762.

⁹⁶ Id. at 763 III.

Lands Council I, Ecology Center, Lands Council II, and III:*Lands Council v. Powell, Lands Council I*

The Iron Honey Project goal was to restore a heavily degraded watershed in the Idaho Panhandle National Forest by improving the aquatic and terrestrial habitat and wildlife in the area. The selected modified Alternative Eight of the project EIS allowed a logging component of up to 17.5 million board feet of lumber by shelterwood silvicultural systems of 1,408 acres in the forest as a source of funding for the restoration component.⁹⁷ Lands Council objected to the chosen alternative. In 2004 Lands Council challenged the decision granting summary judgment in favor of the USDA Forest Service by the United States District Court for the District of Idaho claiming that it violated NEPA and NFMA.

In the Ninth Circuit Court of Appeals, Lands Council contended that the USDA Forest Service cumulative effects analysis included in the EIS was incomplete and that the scientific methodology was improper because it failed to consider prior timber harvests, reasonably foreseeable timber harvests, the possibility of toxic sediment transport as a result of the project and those effects on Westslope Cutthroat Trout.⁹⁸ The Court found that the USDA Forest Service did not fully disclose all prior timber harvests because they did not perform an individual analysis of each harvest, including the method of harvest, the result of the harvest, etc.⁹⁹ The Court ruled in favor of the USDA Forest Service in regard to the cumulative effects challenge of Lands Council of reasonably foreseeable timber harvests.¹⁰⁰ In the final decision on the challenge of the cumulative effects analysis by the USDA Forest Service, the Court found that the data provided by the USDA Forest Service on the Projects effects on Westslope cutthroat trout was outdated because it had not been updated in thirteen years. The USDA Forest Service countered this with claims that there had been various surveys within the previous 8 years.¹⁰¹ The appellate court concluded that the agency used “stale data” because it had not included surveys since 1997, over five years before the district court case, and this did not allow the agency to make a fully

⁹⁷ *Lands Council v. Powell*, 379 F. 3d 738 (2004) at 742, amended *Lands Council v. Powell*, 395 F. 3d 1019 (2005).

⁹⁸ *Id.* at 744. It is not indicated that the Westslope Cutthroat Trout are a sensitive species in the project area on the record. The presence of this species may be an indicator of fisheries health.

⁹⁹ *Id.* at 745.

¹⁰⁰ *Id.* at 746, citing *Or. Natural Res. Council v. Marsh*, 832 F.2d 1489. 1489 (9th Cir. 1987).

¹⁰¹ *Lands Council v. Powell*, 395 F.3d 1019 (2005) at 1031

informed decision.¹⁰² Thus, this cumulative analysis was deemed inadequate by the appellate court to comply with the hard look requirements of an EIS under NEPA.

Lands Council then challenged multiple aspects of the methodology, and the underlying science, used by the USDA Forest Service to analyze projects impacts that are required by NEPA. Lands Council claimed that the use of the Water and Sediment Yields Model (WATSED model) to analyze in-stream sedimentation in the Final EIS was arbitrary and capricious because it was incomplete and this fact was not disclosed in the document.¹⁰³ The WATSED model left out important variables in the analysis, including high peak flow analysis, erosion of stream banks and channels, and peak flow events caused by “rain-on-snow” weather events.¹⁰⁴ The agency claimed that the dispute was technical in nature. The Court cites NEPA at 40 C.F.R. §1500.1(b) and 40 C.F.R. §1502.22, stating that NEPA requires all information included in the EIS must be of high quality and the most scientifically accurate and that if there is incomplete data, it must be disclosed. The WATSED model was not complete, and this was not disclosed, thus the Court sided with Lands Council and the use of an incomplete model resulted in an arbitrary and capricious decision.

The Lands Council finally claims that the USDA Forest Service has violated NFMA. As required by 16 U.S.C. §1604 (a), NFMA requires that a forest plan be created for each national forest, and following each site-specific project in that national forest area must comply with the plan. Lands Council’s NFMA claims included, the agency’s inconsistency with the projects compliance with fish protection standards included in the IPNF Forest Plan, two accounts in regard to the projects impacts to old-growth forests, and finally, the methodology used in its analysis of disturbed soil conditions did not meet statute standards.

Lands Council contends that the USDA Forest Service violated NFMA on two accounts in regard to the Projects impacts on old-growth, 1) That the Project plan does not reach the required minimum of 10 percent old-growth as required by the Forest Plan. The 10-percent old-growth claim was denied because that minimum was being met in the area currently and because there was no old-growth included in the timber harvest plan. 2) Lands Council claimed that the agency was required to take a more in depth look at the projects cumulative effects on the

¹⁰² Id.

¹⁰³ Id. at 749.

¹⁰⁴ *Lands Council v. Powell*, 395 F.3d 1019 (2005) at 1031.

Management Indicator Species that require old-growth habitat.¹⁰⁵ The USDA Forest Service relied on the timber stand management database (TSMRS) to calculate old-growth habitat available as a part of previously accepted “habitat as proxy” in the “proxy-on-proxy” approach to monitor selected indicator species.¹⁰⁶ The Court stated that in this case, the use of the TSMRS data to determine habitat trends resulted in the use of the habit as proxy method to be flawed and unreliable.¹⁰⁷ TSMRS had been previously deemed as inaccurate, and while the USDA Forest Service had bolstered this method with on the ground spot surveys, this was deemed as inadequate by the Court because of the discrepancies between the measured variables by the database and the surveys. Thus, the USDA Forest Service had violated NFMA on this account because it “has not ensured that there are no adverse viability concerns to the relevant MIS because it did no monitor MIS population trends, and its proxy on proxy approach was flawed as applied here.”¹⁰⁸

The final claim against the USDA Forest Service in its violation of NFMA is of the analysis of disturbed soils conditions in the Final EIS. The IPNF Forest Plan does not allow projects that would “create detrimental soil conditions in 15-percent of project area”¹⁰⁹ The Lands Council challenged the spreadsheet methodology used by the USDA Forest Service to calculate to amount of soil in a detrimental state at the time of the Project. The USDA Forest Service claimed that because it had previously sampled soils within the Forest, although not much in the activity area, that the methodology is reliable because similar soil types act the same.¹¹⁰ The Court cited *Kettle Range Conservation District v. United States Forest Service*, 148 F. Supp. 2d 1107, 1127 (E.D. Wash. 2001), as the backbone to their decision, emphasizing that the USDA Forest Service’s choice to not walk the project area, or test most of samples from the project area, was impermissible.¹¹¹ The Court claimed that lack of “boots on the ground” methodology to verify the hypothesis and predictions from the spreadsheet model emphasized the unreliability

¹⁰⁵ *Lands Council v. Powell* (2005) at 1036.

¹⁰⁶ *Id.* at 1036.

¹⁰⁷ *Id.* at 1036.

¹⁰⁸ *Id.* at 1037.

¹⁰⁹ *Id.* at 1034.

¹¹⁰ *Id.* at 1034.

¹¹¹ *Id.* at 1034.

and insufficiency of the methodology used by the USDA Forest Service.¹¹² The Court specifically stated that the agency was required to verify its methodology with observation.¹¹³ Thus, the Court was imposing their will on what it believed was the correct scientific methodology. In this instance, it was required that the agency verifies its hypothesis and predications of the model through observations. The Court used this reasoning as to why the agency was not granted deference, and was ultimately in violation of NFMA.¹¹⁴ The best scientific information was determined by the acting judges, which set a base rule for further judgments.

Ecology Center v. Austin

The Lolo National Forest Post Burn Project, was developed in response to the 2000 wildfire in the Forest, which burned approximately 74,000 acres. The USDA Forest Service conducted the required EIS and selected “Alternative Five”, which allowed commercial thinning and prescribed burning in old-growth stands in the forest and salvage logging in the burned areas. The commercial thinning and prescribed burning in the old-growth stands in the forest plan, act as a rehabilitative treatment to “correct uncharacteristic forest development [of an accumulation of forest fuels] resulting from years of fire suppression... [and] the treatment is designed to leave most of the desirable old-growth trees in place and to improve their health.”¹¹⁵

Ecology Center first objected to the project in 2003, which led to the hearings in the district court. The district court granted summary judgment in favor of the USDA Forest Service, which was followed by an appeal to Ninth Circuit. In 2005, Ecology Center, Inc. challenged the district court’s ruling. The Ninth Circuit Court of Appeals reviewed the case *de novo* to relook at the record at hand¹¹⁶, applying a low standard of review to the district court, to determine if the USDA Forest Service’s actions were arbitrary and capricious.

¹¹² Id. at 1035. “Was the Forest Service “dead on” or “dead wrong”? The Final Environmental Impact Statement is inadequate to tell.”

¹¹³ Id. at 1035. “Under the circumstances of this case, the Forest Service’s basic scientific methodology, to be reliable, required that the hypothesis and predictions of the model be verified with observation.”

¹¹⁴ Id. at 1035 Here the Court is establishing a standard of scientific methodology to which is appropriate for the agency. “Under the circumstances of this case, the Forest Service’s basic scientific methodology, to be reliable, required that the hypothesis and prediction of the model be verified with observation.”

¹¹⁵ *Ecology Center v. Austin*, 430 F.3d 1057 (2005) at 1063. And inserted.

¹¹⁶ Citing *Lands Council v. Powell* (2005).

Ecology Center argues that the USDA Forest Service's plan for treatment of old-growth habitat violated NFMA because it does not meet the mandate for species diversity and viability and NEPA because it does not address in the EIS the uncertainties of the treatment.¹¹⁷ The USDA Forest Service claimed that it did not need to have direct observation of the effects of treatment of old-growth because it has reason to believe that it will benefit this habitat with short-term observations and that the Court should defer to the agency. The agency utilized a report that observed two woodpecker species in the old-growth forest that had been treated, but never actually monitored treated old-growth and its impact on the woodpecker.¹¹⁸ The Court agreed that the agency methodology should be entitled to deference, but that the methodology should be reasonable, citing *Lands Council v. Powell*, 379 F.3d at 752.¹¹⁹ The Forest Service cited *Inland Empire Public Lands Council v. U.S. Forest Service*, 88 F. 3d 754 (9th Cir. 1996) in its defense and call for deference on the matter to monitor the treated area, rather than all dependent species.¹²⁰ The Court found this argument non-compelling and determined that the USDA Forest Service treatment of old-growth violated NFMA. This finding was also true for its violation of NEPA because the USDA Forest Service's EIS did not discuss in detail the concerns regarding old-growth treatment, but only its reasoning for including it in the project.¹²¹

Ecology Center argued that the salvage harvesting of black-backed woodpecker habitat violated NFMA and NEPA because the EIS does not thoroughly explain the reasoning for the USDA Forest Service's plan for salvage and its effect on the sensitive species. The USDA Forest Service designated the *Picoides arcticus*, black-backed woodpecker as a sensitive species in the

¹¹⁷ Id. at 1064 and 1065.

¹¹⁸ Id. at 1063 and 1064. Stating “the Service maintains that it need not do so because (1) it has observed the short-term effects of thinning old-growth stands via commercial logging and prescribed burning on forest composition, (2) it has reason to believe that certain old-growth dependent species would prefer the post-treatment composition of old-growth forest stands, and (3) its assumption that treatment does not harm old-growth dependent species is therefore reasonable.”

¹¹⁹ Id. at 1064. Noting again that the methodology used, and the science behind a decision must be supported by a hypothesis and prediction that are verified by observation. “Just as it would be arbitrary and capricious for a pharmaceutical company to market a drug to the general population without first conducting a clinical trial to verify that the drug is safe and effective, it is arbitrary and capricious for the Forest Service to irreversibly “treat” more and more old-growth forest without first determining that such treatment is safe and effective for dependent species.”

¹²⁰ Habitat as a proxy methodology. “Proxy on proxy” method. This method was found inadequate in Idaho Sporting Congress, 305 F. 3d at 972-73 if the methodology is not certain to ensure viable populations.

¹²¹ *Ecology Center, Inc. v. Austin* (2005).

project EIS.¹²² In the LRMP, the agency must provide for the bird's habitat under the forests snag standards.¹²³ This bird species is a habitat specialist that uses new post-fire habitat. The USDA Forest Service admitted from observations of post fire salvage in 1998 that salvage of post-fire habitat "will impact individuals or habitat [of black-backed woodpeckers]" and only a very small amount of salvage harvest could be completed if there was an equal amount of habitat created through prescribed burns.¹²⁴ The EIS considered the effect that the salvage would have on the sensitive species and it was determined that the fires from year 2000 would offset any possible negative effect in addition to the mitigation plans.¹²⁵ The agency did not explain, in qualitative terms, how the 2000 fires changed the woodpecker habitat from "critical" to "sufficient".¹²⁶ The Court determined that the agency did not take the requisite "hard look" at all the facts required by NEPA to allow the public and the agency a fully informed decision, and was arbitrary and capricious in their fulfillment of NEPA.¹²⁷ Similar reasoning was used in the Court's holding in its NFMA decision. The Court determined that because the agency did not provide a factual basis in its project plan and could not explain the reasoning in its decision, that the agency was arbitrary and capricious and had violated NFMA.

Ecology Center finally challenges the USDA Forest Service's soil quality analysis as required by the Regional Soil Quality Standard because the methodology used relied on computer modeling, mapping and aerial photos, and samples throughout the entire forest but were not verified with direct samples.¹²⁸ This is a similar challenge made in *Lands Council v. Powell*

¹²² Id. at 1066.

¹²³ Lolo National Forest Plan, 1986. Appendix N. Available at <http://www.fs.usda.gov/main/lolo/landmanagement/planning>

¹²⁴ Id. at 1066.

¹²⁵ Id. at 1066.

¹²⁶ Id. at 1067.

¹²⁷ Id. at 1067 and 1068. The Court states: "Where, as here, "the information in the . . . EIS was so incomplete or misleading that the decisionmaker and the public could not make an informed comparison of the alternatives, revision of an EIS may be necessary to provide `a reasonable, good faith, and objective presentation of the subjects required by NEPA.'" *Animal Def. Council v. Hodel*, 840 F.2d 1432, 1439 (9th Cir.1988) (quoting *Johnston v. Davis*, 698 F.2d 1088, 1095 (10th Cir.1983)), *amended by* 867 F.2d 1244 (9th Cir.1989); *see also Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1150 (9th Cir.1998) ("[A]llowing the Forest Service to rely on expert opinion without hard data either vitiates a plaintiff's ability to challenge an agency action or results in the courts second guessing an agency's scientific conclusions. As both of these results are unacceptable, we conclude that NEPA requires that the public receive the underlying environmental data from which a Forest Service expert derived her opinion.")"

¹²⁸ Id. at 1068. The standard states that the USDA Forest Service cannot allow an activity that has the possibility to create detrimental soil conditions in 15% of the project area.

(2004, amended 2005), and *Kettle Range Conservation Group v. U.S. Forest Service* (2001). The Forest Service emphasized that this case was different from each and that the Regional Soil Quality Standards are not all controlling on the Lolo National Forest because it was not part of the Lolo National Forest Plan, although the agency included the standard in both the draft EIS and the final EIS.¹²⁹ The Forest Service also claimed that they had “completed sufficient on-the-ground verification of its soil quality estimates” and thus were not acting unreasonably.¹³⁰ The agency emphasized the on site soil sampling that it took during the Burned Area Emergency Response (BAER) assessment. The BAER program utilizes scientists in a variety of specialties “to determine the need for and to prescribe and implement emergency treatments on Federal Lands to minimize threats to life or property resulting from the effects of a fire or to stabilize and prevent unacceptable degradation to natural and cultural resources.”¹³¹ The USDA Forest Service admitted that the BAER samples were taken in burned areas rather than the potential harvest areas. They noted that the soils in these samples were similar to those in the activity area and would be sufficiently reliable.¹³² The Court concluded that the use of the BAER samples were not acceptable, and cites the Forest Services own Region Scientist Nesser as determining the samples not credible because they do not comply with the Standards requirement of direct activity area testing.¹³³ The USDA Forest Service then points to field reports in the record that included some direct observation of the project area as sufficient in fulfilling its NFMA requirements. The Court could not accept these because they were informal reports without notes on protocol or the qualifications of the samplers, and thus could not use these to distinguish the case from *Lands Council I*.¹³⁴ The Court also noted that the final EIS explained that the agency would perform testing and verification of soil conditions in the field before beginning any activity, but there is no connection of this promise in the draft EIS or the final EIS to the described field reports.¹³⁵ The agency’s plan to conduct field trials to verify modeling estimates in its EIS allowed the Court to determine that on-site analysis is necessary, and approving before there completion is

¹²⁹ Id. at 1069 and 1070.

¹³⁰ Id at 1069.

¹³¹ Witt, Shelly; USDA Forest Service. 1999. Burned Area Emergency Response. Retrieved from: <http://www.fs.fed.us/biology/watershed/burnareas/background.html>

¹³² Ecology Center v. Austin (2005) at 1070.

¹³³ Id. at 1070. Noting the same arguments being denied in *Lands Council v. Powell* (*Lands Council I*).

¹³⁴ Id. at 1070.

¹³⁵ Id. at 1071.

unacceptable.¹³⁶ These facts forced the Court to hold that the USDA Forest Service acted arbitrarily and capriciously when approving the Project without “boots on the ground” methodology to determine soil conditions, violating NFMA and the “hard look” standard of NEPA.¹³⁷

The Court ultimately determined that the USDA Forest Service was not deserving of deference when it came to accepting Alternative Five of the Lolo National Forest Post-Burn Project. The Court reserved the district court decision and found in favor of Ecology Center. Judge McKeown dissented on the decision:

“The Ninth Circuit, like the other circuits, repeats frequently the legal mantras of administrative review in the context of environmental decisions: “arbitrary and capricious,” “hard look,” and “no second guessing.” These standards are easy to articulate, but it is more difficult to know when we have crossed the line from reviewer to decision-maker. In this case, we have gone too far.”¹³⁸ [Judge McKeown reiterated the role of the reviewing court, which he thought they had superseded by] “ratchet(ing) up the scrutiny we apply to the scientific and administrative judgments of the Forest Service.”¹³⁹

Lands Council v. McNair, Lands Council II

The Mission Brush Project, encompassing 31,350 acres, located in the Bonners Ferry Ranger District of the Idaho Panhandle Forest aimed at reestablishing historic stand conditions by performing silvicultural treatments, including restoration cutting and commercial logging on 3,829 acres.¹⁴⁰ The USDA Forest Service chose Alternative 2, which included a commercial logging component of the project that was split into three timber sales, two of which had commenced by the time of litigation. The USDA Forest Service conducted a supplemental EIS as a result of the Lands Council I decision.¹⁴¹ In 2006, Lands Council challenged the project in the U.S. District Court for the District of Idaho on grounds that the project violated the APA, NFMA, and NEPA.¹⁴²

¹³⁶ Id. at 1071.

¹³⁷ Id. at 1071.

¹³⁸ Id. at 1072.

¹³⁹ Id. at 1072

¹⁴⁰ *Lands Council v. McNair*, 494 F.3d 771 (2007) at 774.

¹⁴¹ *Lands Council v. McNair*, 537 F.3d 981(2008).

¹⁴² *Lands Council v. McNair*, 494 F.3d 771 (2007).

The Court examined Lands Councils challenge to the Mission Brush Project on the basis of NFMA to determine if the district court's injunction was deserved. The Court noted that the USDA Forest Service's methodology has not been proven reliable because it had not demonstrated how the Project will not cause harm to the designated sensitive species.¹⁴³ This unreliability is based on the fact that the USDA Forest Service, like in *Ecology Center v. Austin*, 430 F. 3d at 1064 (2005), had relied on the hypothesis that treating old-growth would benefit the designated sensitive species, which the Court states is unverified. The USDA Forest Service in this case relied on the Dawson Ridge Study, Dawson Ridge Flammulated Owl Habitat Monitoring from 2006 as a basis for the effects of treated old-growth.¹⁴⁴ The survey resulted in the acceptance that *Psiloscops flammeolus*, flammulated owls were using an area that had undergone similar treatment conditions based on in-field responses from the owls, or "hooting" and that the area had been logged and underburned recently. The report determined that it could conclude that the logging and under-burning had improved the owl's habitat, but that the hoot response was encouraging to at the very least, imply that the area could maintain owl habitat.¹⁴⁵ The Court determined that the survey was unacceptable due to its circumspect results that treatment may be encouraging to maintain dependent sensitive species.¹⁴⁶ The Court restates its position that because the USDA Forest Service did not find concrete evidence from the Dawson Ridge Study and did not "walk the land" or provide "on the ground analysis" that the other studies it conducted¹⁴⁷ are unreliable and insufficient and thus Lands Council is likely to win its claims on NFMA, meriting an injunction.¹⁴⁸

Lands Council claimed that the USDA Forest Service violated NFMA because the Project does not meet the Idaho Panhandle National Forest Plan 10(b) standard requiring 10

¹⁴³ Id. at 776. The designated sensitive species in the project area were the flammulated owl, the northern goshawk, the fisher, and the western toad.

¹⁴⁴ Id. at 776. The Dawson Ridge Study was based on a monitoring project that surveyed 5 $\frac{1}{5}$ acre plots in an 18-acre total area that had been logged and underburned. The survey resulted in a single hoot response, which signified use in the area.

¹⁴⁵ Id. at 776.

¹⁴⁶ Id. at 777.

¹⁴⁷ These include the study by R. Richard Howie and Ralph Ritcey, *Distribution, Habitat Selection, and Densities of Flammulated Owls in British Columbia*, USDA Forest Serv. General Technical Report RM-142 (1987) and technical papers Montana Partners in Flight, Montana Bird Conservation Plan (2000); Idaho Partners in Flight, Idaho Bird Conservation Plan (2000) at 777.

¹⁴⁸ Id. at 777.

percent old-growth in the forest.¹⁴⁹ Lands Council based this argument on its own report, Ellen Picken, *Lost Forests: An Investigative Report on the Old-Growth of North Idaho* (2005), which stated that over 70 percent of the designated old-growth in the area actually did not meet the 10(b) standard. The USDA Forest Service disagreed with these claims based on the study, *Review of Old Growth Assessments for the Idaho Panhandle National Forest* by Dr. Arthur C. Zack and the IPNF stand map, which found that approximately 12 percent of the forest could be characterized as old-growth.¹⁵⁰ The Court cited *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378, 109 S. Ct. 1851, 104 L. Ed. 2d 377 (1989) when granting favor to the USDA Forest Service on this claim, when an agency is reviewing conflicting data that it has the right to rely on its own experts, granting the agency deference.

The Ninth Circuit Court then examined Lands Council's claims that the USDA Forest Service violated NEPA because the Service did not fully discuss the scientific uncertainty of the methodology for improving wildlife habitat.¹⁵¹ The USDA Forest Service had pointed to the supplemental final EIS prepared, but the Court concluded that the SFEIS does not actually discuss how the treated habitat will impact wildlife and the uncertainties that surround it.¹⁵² The Court agrees with Lands Council on the merit that the USDA Forest Service contends that old-growth that has been treated will benefit dependent sensitive species as a fact instead of a hypothesis, nor does it cite the sources that it relies to make those claims. Thus, the Court found that Lands Council would likely win their claims on NEPA.

The Court overall found in favor of Lands Council and reversed the district court decision with instructions to remand with a preliminary injunction of the project. This decision was largely based on the outcome of *Ecology Center v. Austin* (2005) and the requirements that it set forth to ensure findings are “verified with observation” and “on the ground analysis”, which are then judged to ensure detail and quality of the work.¹⁵³ Judge Milan D. Smith Jr. specially concurred in the Court's decision, stating “*Ecology Center v. Austin*, 430 F.3d 1057 (9th Cir.2005) is binding law in this circuit and dictates the outcome of this case. However, I write a separate concurrence in this case because, like Judge Margaret McKeown, I believe that *Ecology Center* was wrongly

¹⁴⁹ Id. at 778.

¹⁵⁰ Id. at 778. Dr. Zack disagreed with Lands Council's methodology used in the Lands Council's study.

¹⁵¹ Id. at 778.

¹⁵² Id. at 778.

¹⁵³ Id. at 783.

decided.”, which reminded us of the Courts movement to ignoring the arbitrary and capricious standard of deference towards something more demanding.¹⁵⁴

Judge Ferguson, replied to Judge Smith’s special concurrence with his own opinions of the recent decisions of the Ninth Circuit and the effect those decisions have had on the timber industry and the USDA Forest Service.¹⁵⁵ These back and forth opinions are somewhat of a testament of the source of confusion an agency can have with the varying opinions of the judiciary.

Lands Council v. McNair, En banc Ruling, Lands Council III

The following year, the Ninth Circuit Court of Appeals granted *in certiorari, en banc*, to “clarify some of our environmental jurisprudence with respect to our review of the actions of the United States Forest Service.”¹⁵⁶ The Court reviewed the decision for injunction to determine if there was an abuse of discretion by the district court.¹⁵⁷ The Court reviewed each of its decisions in *Lands Council II* and how it had erred in the way it applied its analysis to the USDA Forest Service’s compliance with NEPA and NFMA. The Court states:

“In essence, *Lands Council* asks this court to *act as a panel of scientists* that instructs the Forest Service how to validate its hypotheses regarding wildlife viability, chooses among scientific studies in determining whether the Forest Service has complied with the underlying Forest Plan, and orders the agency to explain every possible scientific uncertainty. As we will explain, this is not a proper role for a federal appellate court. But *Lands Council*'s arguments illustrate how, in recent years, our environmental jurisprudence has, at times, shifted away from the appropriate standard of review and could be read to suggest that this court should play such a role.”
[*Emphasis Added*]¹⁵⁸

The Court restated that the purpose for NFMA is not for non-use of the nation's forests but for *multi-purpose* use of which includes timber harvesting, recreation, and wilderness.¹⁵⁹ This means that habitat viability, although must be included in the forest plan, it is not the USDA Forest Service’s only focus. In *Lands Council II* (2007), they claimed that the USDA Forest Service violated NFMA because they did not support their scientific methodology to show its

¹⁵⁴ *Id.* at 780.

¹⁵⁵ Judge Reinhardt concurred with Judge Ferguson.

¹⁵⁶ *Lands Council v. McNair*, 537 F. 3d 981 (2008).

¹⁵⁷ *Id.* at 986.

¹⁵⁸ *Id.* at 988.

¹⁵⁹ *Id.* at 990.

reliability in regard to the flammulated owl. The Appellate Court first ruled in favor with Lands Council based on the results of *Ecology Center v. Austin* (2005). The decision made in Lands Council I created the rule that the USDA Forest Service must always show the reliability of its scientific methodology.¹⁶⁰ Lands Council I, Ecology Center, and Lands Council II, are all focused on the USDA Forest Service's use of modeling methods rather than "boots on the ground" methods. In Lands Council I the Court created rule that on site analysis was required for soils analysis to ensure reliability for the scientific methodology in projects, in Ecology Center that rule was expanded to all aspects of the methodology chosen by the USDA Forest Service, not just the soils analysis.¹⁶¹ These strict requirements are not included in the either the statute, or the rule authorized by the statue. Nor do they include as requirements contained in IPNF forest plan. Thus the Court stated that the USDA Forest Service was deserving of deference to determine what scientific methods based on the current stat of knowledge, are used to ensure wildlife viability.

The Court cites Judge McKeown's dissent in Ecology Center as a realization that the decision made in that case was out of line with the role that the Court plays and the proper deference was not granted to the USDA Forest Service.¹⁶² In this decision, the Court states that its role is to determine if the agency acted unreasonably, following the APA §706, "arbitrary and capricious" standard. When the question is concerning a topic of technical expertise, the court should then grant a greatly level of deference to the agency.¹⁶³ And thus, the court's role is not to determine what scientific methods are the best or to impose the procedural requirements not mandated by Congress. The Court states, that as nonscientists, they cannot impose rules on the agency to show how its chosen methodology meets NFMA, but can only determine if the research chosen by the agency to support a projects conclusions are arbitrary and capricious.¹⁶⁴ As a result, the Court overruled Ecology Center, confirming the conclusion that Land's Council I's requirement for on site soil analysis is specific to that case.

The Court then analyzed its previous ruling on the USDA Forest Service's methodology and its reliability concerning the effects of treating old-growth habitat on flammulated owl

¹⁶⁰ Id. at 990.

¹⁶¹ Id. at 991.

¹⁶² *Ecology Center v. Austin* (2005) at 1072.

¹⁶³ Id. at 993. "This approach respects our law that requires us to defer to an agency's determination in an area involving a "high level of technical expertise.""

¹⁶⁴ Id. at 994.

populations. The *en banc* Court determined that the USDA Forest Service was in fact not arbitrary and capricious when it determined that maintaining and possibly improving flammulated owl habitat would result in population viability.¹⁶⁵ In Lands Council II, the USDA Forest Service maintained that the treatment of old-growth would result the maintenance of flammulated owls, which was backed up with multiple studies and on the ground analysis from the Dawson Ridge Study.¹⁶⁶ The Court states that the record although not very extensive, it is sufficient to defer to the agency, an example of high deference based on Auer deference for the administration of the Forest Services rules to administer the NFMA. The Court also determined that although there is planned harvest within the project, this does not necessarily mean that the flammulated owl habitat will be disturbed and thus the habitat as a proxy for population viability analysis is sufficient as long as the Service was not arbitrary or capricious in its decision. In this case, the USDA Forest Service did not violate NFMA, and Lands Council was likely not to win in that case.¹⁶⁷ This decision ultimately overruled *Idaho Sporting Congress v. Thomas*, 137 F. 3d 1146 (9th Cir. 1998).¹⁶⁸

The Court then examined its decision in Lands Council II in regard to Lands Council's NFMA claims in regard to the USDA Forest Service's compliance with the Standard 10(b) to maintain 10% of old-growth habitat throughout the forest of the IPNF Forest Plan. The USDA Forest Service had presented two surveys that showed it was in compliance, one of which is of the Forest Inventory and Analysis (FIA) National Program, and the other from a method independently developed from the FIA.¹⁶⁹ Lands Council used a report developed by them, of which USDA Forest Service experts disagree with its methodology and old-growth habitat designation characteristics. The USDA Forest Service also showed how that old-growth would

¹⁶⁵ Id. at 994.

¹⁶⁶ This was the study that received the single flammulated owl hoot during the survey.

¹⁶⁷ Id. at 996. The Court compares this case to *Inland Empire Public Lands Council*, 88 F. 3d at 761.

¹⁶⁸ The Court stated at 997 "Thus, a planned disturbance to a habitat does not preclude the Forest Service from using the habitat as a proxy approach to establish a species' viability when the disturbance does not reduce the suitable habitat so as to threaten that species' viability."

¹⁶⁹ Id. at 999. From the FIA site: "The Forest Inventory and Analysis (FIA) Program of the U.S. Forest Service provides the information needed to assess America's forests. As the Nation's continuous forest census, our program projects how forests are likely to appear 10 to 50 years from now. This enables us to evaluate whether current forest management practices are sustainable in the long run and to assess whether current policies will allow the next generation to enjoy America's forests as we do today. FIA reports on status and trends in forest area and location; in the species, size, and health of trees; in total tree growth, mortality, and removals by harvest; in wood production and utilization rates by various products; and in forest land ownership." Retrieved from <http://www.fia.fs.fed.us/>

not be harvested in the plan, and they noted that possible further disturbances could decrease the amount of old-growth in the forest, but as long as the 10 percent of old-growth designation was being met, the USDA Forest Service would be meeting the requirement. The Court held that the district court was correct to conclude that Lands Council would not win on this claim.

The Court then looked at how it and the district court responded to Lands Council's NEPA claims. The Court held that its previous standard that the USDA Forest Service is in violation when all uncertainties are addressed in the EIS, is an error, and that standard put undue burden on the agency.¹⁷⁰ Lands Council also contended that the USDA Forest Service violated NEPA when it did not address scientific uncertainties in its habitat viability analysis. The Court concluded that the Service had fully explored the environmental impacts as required by NEPA, and did not need to address the uncertainties raised by the multiple articles produced by Lands Council because they did not actually raise issue with the methodology used by the Service.¹⁷¹

Overall, the Court determined that Lands Council would have not been likely to win on its NFMA and NEPA claims it presented in 2007, Lands Council II. The Court then determined that the district court's decision to not enjoin the USDA Forest Service project was the correct one. The Court determined that its non-deferential behavior was not the correct one, and that its actions toward the USDA Forest Service were unwarranted.

Post Lands Council Cases:

Following the Lands Council III decision, the USDA Forest Service continually was challenged on the scientific methodology used to satisfy NEPA and NFMA requirements.¹⁷² Of the thirteen cases analyzed that included the USDA Forest Service, and a NEPA and NFMA challenge, all cases cited Lands Council III in the Appellate Courts decision.¹⁷³ These citations are mostly in regard to the Courts decision of its standard of deference. Of these cases, 10 of 13 of them, 77 percent, resulted in the appellate court affirming the district courts decision in favor

¹⁷⁰ Id. at 1001.

¹⁷¹ Id. at 1002.

¹⁷² For example challenges to the USDA Forest Service in regard to the use of habitat as proxy or proxy on proxy methods., in *Ecology Center v. Castaneda* 574 F.3d 652 (2009), *Native Ecosystems Council v. Tidwell* 599 F.3d 926 (2010), *Hapner v. Tidwell* 621 F.3d 1239 (2010), *Earth Island Institute v. Carlton* 626 F.3d 462 (2010), *Lands Council v. McNair* 629 F.3d 1070 (2010), *Earth Island Institute v. United States Forest Service* 697 F.3d 1010 (2012), *Friends of the Wild Swan v. Weber* No. 13-35817 and 13-35819 (2014).

¹⁷³ See Appendix Table A1.

of the USDA Forest Service. Although not all cases granted a high level of deference to the agency, the Court looked to see if the agency followed procedure and was arbitrary or capricious. The following cases are examples of the general attitude of the Court following Lands Council III.

League of Wilderness Defenders-Blue Mountains Biodiversity Project v. United States Forest Service

The “Forest Dynamics After Thinning and Fuel Reduction in Dry Forests” Project started in 2007, was created to reduce fire hazard and beetle infestations in the Lookout Mountain Unit of the Pringle Falls Experimental Forest within the Deschutes National Forest.¹⁷⁴ The Lookout Mountain Unit, herein Unit, is made up of 3,500 acres of closed canopy ponderosa pine forest. The USDA Forest Service created the research project when it observed increased risk of fire and beetle infestation in the area, which could disrupt ongoing and future research projects in the Unit.¹⁷⁵ The project specifically included six research objectives¹⁷⁶ to determine the short-term and long-term effects of treatments on forest vegetation.¹⁷⁷ The project entailed multiple levels of logging and controlled burning within 4 blocks in the Unit, including a no treatment control.¹⁷⁸

The notice of intent to prepare an EIS was published in the Federal Register in 2008. Over the next two years, the USDA Forest Service sent out various letters of intent and offered

¹⁷⁴*League of Wilderness Defenders-Blue Mountains Biodiversity Project v. United States Forest Service*, 689 F. 3d 1060 (2012) at 1065.

¹⁷⁵ *Id.* at 1066.

¹⁷⁶ The study states the following six objectives:

- “1. What set of fuel reduction treatments best accelerates the development of large trees while over the long-term reintroduce[s] natural disturbance processes that provide greater ecosystem resiliency?
2. What is the long-term influence of climate change interacting with a set of fuel reduction treatments on vegetation dynamics and forest structure?
3. Can single cohort stands be readily converted to multi-cohort stands?
4. Do multi-cohort stands share the same risks of multiple, interacting stresses as single-cohort stands?
5. How does the dominant shrub, giant chinquapin (*Chrysolepis chrysophylla*), respond in the near-term to a set of fuel reduction treatments?
6. How does the residual stand structure resulting from a set of fuel reduction treatments interact locally and in the near-term with wind to cause additional structural changes?”

¹⁷⁷ Pacific Northwest Research Station. Forest Dynamics After Thinning and Fuel Reduction: A study to refine management options for restoring resiliency in ponderosa pine ecosystems. Obtained at http://www.fs.fed.us/pnw/lwm/lem/projects/lookout_mountain.shtml. The project biologist noted that there was Northern Spotted Owl in the area in July 2011.

¹⁷⁸ *Id.* at 1066. Multiple peer review processes occurred to approve the project.

educational opportunities to learn about the project.¹⁷⁹ In March of 2010, the USDA Forest Service issued its final EIS and chose Alternative 2 the same day. Alternative 2 features various aspects of logging and thinning in the project area, road construction, and amends the Deschutes Forest Plan to exempt the project from Eastside Screens restrictions.¹⁸⁰

In 2012, the League of Wilderness Defenders- Blue Mountains Biodiversity Project, herein the “League”, appealed a 2011 United States District Court for the District of Oregon decision to grant summary judgment in favor of the USDA Forest Service concerning a project in an experimental forest in the Ninth Circuit Court of Appeals.¹⁸¹ The League claimed that the USDA Forest Service EIS did not comply with NEPA. In the District Court’s decision, it stated:

“it would be short sighted for the courts to intervene and dictate that the Forest Service consider alternatives that hamper or eliminate research objectives.... While the requirements of NEPA still apply, the necessary range of alternatives and hard look are strongly informed by the research objectives of the Forest itself.”¹⁸²

The District Court determined that the USDA Forest Service had taken the “hard look” backed by reliable science required by NEPA. The League filed for an emergency injunction in the appeal.

The Ninth Circuit of Appeals reviewed the appeal *de novo* to determine if the Service’s actions were arbitrary and capricious.¹⁸³ The League set out its argument on the basis that the USDA Forest Service EIS was inefficient on three accounts: (1) the Project violated NEPA by not considering a full range of alternatives; (2) the Project overstates the beetle infestation risk and wildfire risk, and (3) the Project doesn’t take a hard look at the impact it has on wildlife species that rely on snags.¹⁸⁴ The Court found in favor of the USDA Forest Service on each account.

The Court’s analysis of the League’s determination that the USDA Forest Service scientific integrity of its project plan includes three claims. The League claimed that the agency overestimated the risk posed by fire and beetle outbreak specifically looks at the Service’s use of

¹⁷⁹ Id. at 1067. The EPA and USFWS both offered positive reports in support of the project.

¹⁸⁰ Id. at 1067.

¹⁸¹ *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. United States Forest Service* (2012).

¹⁸² Id. at 1068.

¹⁸³ The Court cites *Lands Council v. McNair* (2008) as a basis to determine if the Service was arbitrary or capricious.

¹⁸⁴ Id. at 1068, Discussion.

language like “catastrophic”, “imminent”, and “stand-replacing” to describe the risk without the project treatments.¹⁸⁵ The League pointed to the background documents included in the EIS to support its claims, but the Court determined that this argument was inadequate because there is similar language in the reports used to support the risk of beetle infestation.¹⁸⁶ The Court states that the agency is entitled to deference in its decision of supporting documents.¹⁸⁷ Second, the League, argued that the USDA Forest Service analysis of fire risk in the project area was incorrect. The Court found flaws in the plaintiff’s argument in that it had quoted findings of forest biologists stating the actual risk of fire danger in the area.¹⁸⁸ The League finally states that the EIS lacks scientific integrity in that it does not meet the goals to stop tree mortality, because it includes a timber harvest component.¹⁸⁹ The Service clearly explained that the Project goals include protecting future research goals rather than only saving trees in the Project area. Thus, the scientific integrity of the Project was upheld.

Finally, the Court addresses the Leagues claim that the USDA Forest Service did not take the hard look required by NEPA because it did not look at the possible affects the Project had on tree mortality and wildlife habitat. The required hard look requires the agency to look at the direct and indirect impacts that could occur as a result of the project. The Court determined that the Leagues claims regarding tree mortality failed, because the agency took a hard look at the effects the project may have on tree mortality and the presence of snags.¹⁹⁰ The Court found that the research used in the EIS constituted a “hard look” at the possible effects of the project.¹⁹¹ The agency was entitled to use the research they determined to be the best available.

Overall, the Ninth Circuit determined that the USDA Forest Service adequately fulfilled their requirement under NEPA; “The EIS is adequately supported by scientific data and takes a

¹⁸⁵ Id. at 1073.

¹⁸⁶ Id at 1073, stating “We therefore cannot say that the EIS lacks “scientific integrity” or misrepresents the scientific literature when it asserts that trees within the Unit face such a risk.”

¹⁸⁷ Id. at 1074.

¹⁸⁸ Id. at 1074 and 1075. “But in its own administrative appeal, the League quoted forest ecologist Dr. Edwin Royce, who wrote that the experimental forest shows “many locations in need of fuel reduction in order to minimize the probability of the forest being consumed by a future crown fire.” The peer reviewed Study Plan also concludes that [1075] the Unit’s present condition was “conducive to a landscape-scale wildfire.” Given this, the lack of citation to specific scientific evidence supporting the assertion does not warrant reversal.”

¹⁸⁹ Id. at 1075.

¹⁹⁰ Id. at 1077.

¹⁹¹ Id at 1076 and 1077.

hard look at the significant impacts of the Project.”¹⁹² The Court applied deference to the agency’s decisions to proceed with Alternative 2 in the Project.

Native Ecosystems Council v. Weldon

Again in 2012, the USDA Forest Service was challenged in the Ninth Circuit Court of Appeals. In this case, Native Ecosystems Council appealed a decision made in the United States District Court for the District of Montana in regard to a project in the Lewis and Clark National Forest in Montana. Native Ecosystems Council claimed that the agency had violated NEPA and NFMA on eight counts when the USDA Forest Service filed a “finding of no significant impact”, FONSI and approved the project.¹⁹³

The Ettien Ridge Fuels Reduction Project, is aimed at reducing fuels by understory thinning, logging, and burning in the Middle Fork Judith Wilderness Study Area (WSA), one being considered for future wilderness designation. The Project also mitigates wildfire danger in the WSA and Sapphire Village, which is considered a wild land-urban interface community. The project area WSA is notably important because it provides elk and other large animals cover during implementation of the project.¹⁹⁴ Native Ecosystems Council initially had filed an administrative appeal during the EIS analysis, which greatly reduced the size of thinning, logging, burning, and construction of temporary roads.

The Native Ecosystems Council’s NEPA violation claims challenged the USDA Forest Services elk hiding cover methodology. The USDA Forest Service’s method to determine elk hiding relies on aerial photo interpretation methodology, which is based on a 1982 elk logging study.¹⁹⁵ Native Ecosystem Council contends that this methodology is unreliable and inaccurate because it may not be able to account for understory treatments in the project area. The Court

¹⁹² Id. at 1077. It stated “When the Service tried to quantify future snags under the different alternatives, however, it found that “[t]he effort quickly proved questionable” because it relied on too many variables and assumptions about how certain trees might interact with one another over time. The EIS concluded that the issue “did not seem to warrant” the “considerably larger effort” that a more detailed quantitative analysis would require. Instead, the EIS proposes ongoing monitoring during the Project to assess the assumptions about the effects of prescribed fire on snags.”

¹⁹³ *Native Ecosystems Council v. Weldon*, 697 F. 3d 1043 (2012).

¹⁹⁴ Id. at 1049.

¹⁹⁵ Id. at 1052. The study used life sized 2-D cutout elk in various stand types to determine hiding characteristics. The characteristics were classified into their PI types, from which a “Montana Rule” was then created to determine the percent of cover.

held that the Native Ecosystem Council fails to prove that the USDA Forest Service was arbitrary and capricious, they stated:

“The mere fact that Native Ecosystems Council disagrees with the methodology does not constitute a NEPA violation. In reviewing Native Ecosystems Council's NEPA appeal, we may not insert our opinions in the place of those of forest biologists. *Lands Council*, 537 F.3d at 988. Rather, we are required to apply the highest level of deference in our review of the Forest Service's scientific judgments in selecting the elk hiding cover methodology. *Northern Plains*, 668 F.3d at 1075. Given the paucity of Native Ecosystems Council's factual distinctions, and the substantial deference owed to the Forest Service's determinations, we hold that the Forest Service's selection of the PI Type methodology did not violate NEPA. *Lands Council*, 537 F.3d at 987-88.”¹⁹⁶

Native Ecosystems Council contends that the USDA Forest Service's logging and thinning, burning, and slash plans and objectives, were contradicted by previous reports by the agency, and violated NEPA. Native Ecosystem Council claims that the USDA Forest Service logging and thinning would not change the PI type is actually contradicted by the 2007 silvicultural report, of which the research relied on in part. The USDA Forest Service actually based its research on a 2009 study that corrected errors on cutting instructions, and superseded the 2007 silvicultural study. This study was incorporated into the EA and adequately explained indirect and direct effects of the plan. Because the USDA Forest Service supported their EA with the most recent studies, the 2009 study and a supplemental study in 2010, the Court deferred to their expertise and held in favor of the Service.¹⁹⁷ The Council claimed that the project would change the cover classification types were based on little support and ignore the goals of the burning to preserve the cover classification types by removing invasive species. The Court held in favor of the USDA Forest Service on this challenge.¹⁹⁸ The final portion regarding the cutting and slashing project of the elk hiding analysis NEPA challenge were based on Native Ecosystem Councils claims that the slashing would create stumps, resulting in cutover and a change in PI type.¹⁹⁹ The Court held that the USDA Forest Service is entitled to deference for the interpretation of its own rules and regulations and that Native Ecosystem Council holds no merit on its challenge rather than an attempt to distort the research on which it relied.²⁰⁰

¹⁹⁶ Id. at 1053.

¹⁹⁷ Id. at 1055.

¹⁹⁸ Id. at 1055.

¹⁹⁹ Id. at 1055.

²⁰⁰ This rules and regulations this is in reference to, are of the USDA Forest Service's document that defines cutover.

Native Ecosystems Council's NFMA challenges state that the analysis violates NFMA because it would reduce the elk cover below the threshold level required by the Forest Plan and thus the maintenance of cover would be lost.²⁰¹ The same three flaws in logging and thinning, burning, and slash were challenged in the NFMA claims and the Court found in favor of the USDA Forest Service for the same reasons as the NEPA analysis.

Native Ecosystems Council then challenged the goshawk population effects of the project. The goshawk was selected as a Management Indicator Species for old-growth habitat in the Forest Plan, and the Service was required to monitor active nesting sites. If a decrease of 10% of active nesting sites was found, further research would need to be conducted to determine why. The Council contends that the USDA Forest Service violated NFMA because they did not monitor the entire goshawk population, and by failing to conduct the necessary follow-up research.²⁰² The Court determined that the first claim was invalid because goshawk are not site specific to the Project. The second claim, provided the required nexus of the site-specific claim and challenge, but Native Ecosystems Councils claims are denied, as the USDA Forest Service was deserving of deference to their own findings and research. The Ninth Circuit affirmed the District Courts decision, and held in favor of the USDA Forest Service. The Court deferred to the agency's scientific and technical expertise.

These are just some of the decisions that have demonstrates a return to the agency deference, both Chevron with the NFMA and Skidmore with the NEPA being granted to the Forest Service while managing its public forest lands. The other cases shows are similar pattern and our listed in Appendix A.

DISCUSSION:

The possible future policy outcomes from the various ways a court can interpret agency actions and the levels of deference that can be applied are many. This can have varying affects on the way we produce science and manage our natural resources. The analysis of the forty-five cases involving the USDA Forest Service and challenges to their actions in fulfilling the requirements of NEPA, NFMA, and the ESA within the United States Ninth Circuit Court of Appeals shows the still marked inconsistencies in the level of deference applied to the agency, but

²⁰¹ Id. at 1056.

²⁰² Id. at 1057.

the importance of Lands Council III in restoring the arbitrary and capricious standard of review for agency actions. Figure 1 shows the general trend of the 45 cases analyzed. We can see that there was a shift to a lower attitude overall in the level of deference applied to the agency with Lands Council I, Ecology Center, and Lands Council II. After Lands Council III we see that a majority of the cases result in a higher level of deference applied to the agency. The trend is not hard and fast, but we can see the general dip in deference (Figure 1). One of the most interesting trends we see is the consistent high level of deference applied to the agency following *Earth Island Institute v. United States Forest Service*, 697 F.3d 1010, 2012. The appellate court consistently applied a high level of deference to the agency since 2012, the year the USDA Forest Service promulgated the new forest rule. The 2012 Forest Planning Rule requires the agency to use the best science available in their forest plans and projects.²⁰³ Although the rule was not applicable when the projects involved in these cases were reviewed, it may be that the appellate court, still looked to the agency to determine what the best science available was and agreed with them. However, if Auer deference is applied to agency rules, the agency will be able define best science as it seems fit.

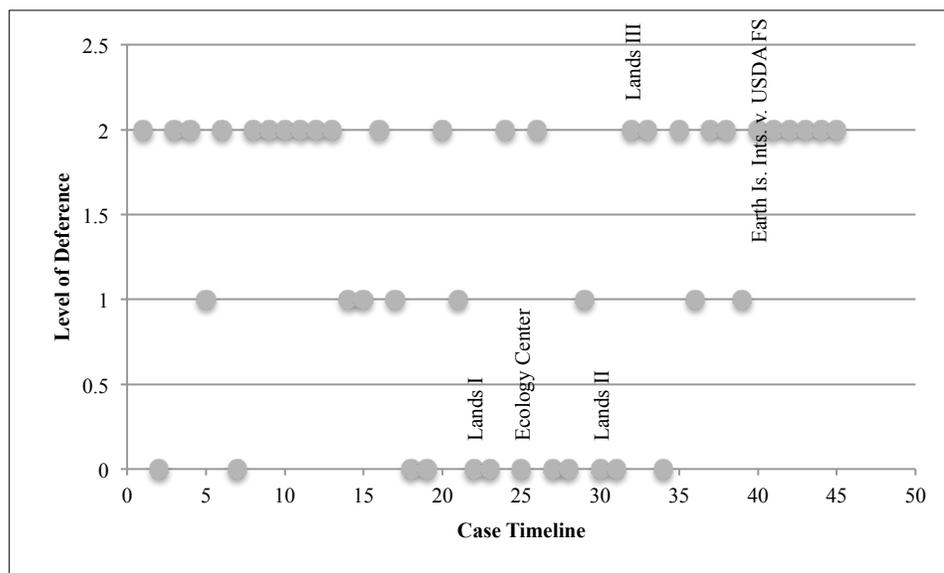


Figure 1: Level of deference applied to the USDA Forest Service in the United States Ninth Circuit Court of Appeals along the 45 case timeline (Appendix). X-axis signifies the number of cases in chronological order from 1990 to 2014. Specific labels on points denote important cases on the timeline. Level 2 signifies high deference, Level 1 signifies mid-level deference, and Level 0 signifies low deference.

²⁰³ 36 C.F.R. §219.6.

The inconsistencies also lie within the district and the appellate court. Lands Council III shows a change in the position of the appellate court when reviewing the district court opinion. Figure 2 shows that there is a marked difference in the way the appellate court reviewed the district court after Lands Council III. We can see that after that case, the appellate court was more likely to affirm a district court case, resulting in a win for the USDA Forest Service (Figure 2). This was determined to be a general attitude of high deference by both courts. Before Lands Council III, there was not a true position by the appellate court when reviewing the district court opinion; Figure 2, appellate court affirming the district court opinion is comparable to the appellate court reversing the district court opinion in the Pre-Lands Council III cases compared with that of Post-Lands Council III. We see that the courts are generally in agreement after the Lands Council III decision.

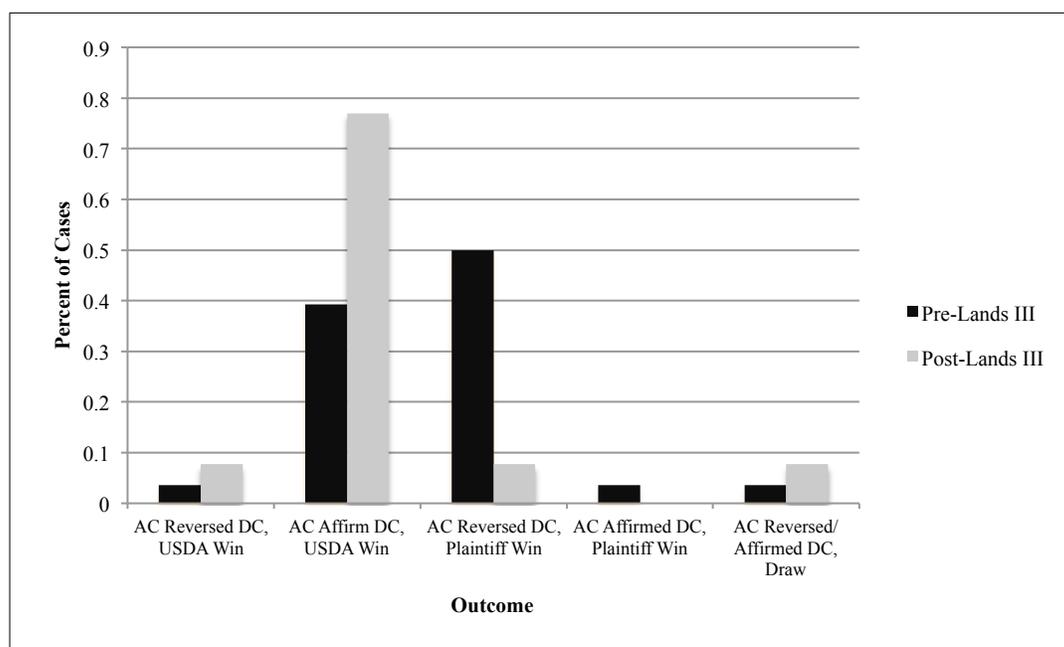


Figure 2: Percent of cases with the described outcomes in the appellate court from the district court pre and post Lands Council III. Sample size of Pre-Lands Council cases is 28, sample size of Post-Lands Council cases in 13.

Results of Lands Council III

The questioning by judges of agency science throughout the levels of the judiciary shown in the case analysis makes us question what is the correct standard to judge scientific methods in the environmental realm. The judicial system works on the act of cross-examination, where each

side presents their truth and defends it with the goal of winning their argument. The facts emerge from the exchanges and the judge determines the outcome.²⁰⁴ Judges have the moral obligation to deduce the truth from arguments, and make decisions in line with the law:

“The moral authority of the courts depends in no small part on tending the boundary between law and policy and confining judges’ activities demonstrably to the side of the law. There, judicial discretion is constrained by the relative impartiality of the constitution, legislation, prior decisions, and well-understood rules of reasoning; on the policy side, by contrast, lies a messy world of trade-offs and choices whose resolution makes judging come perilously close to politics by other means.”²⁰⁵

The choices that the court makes when it crosses the line of law into the policy realm as decision-makers, can have dramatic effects, especially at the Appellate and Supreme Court level as they usurp the power traditionally given to the legislature. This is evident when the Court created rules for agency science in *Lands Council I*, *Ecology Center*, and *Lands Council II*. This is an example of the courts acting as a “science court”, in the sense that the court can judge technical expertise, and determine good from bad science, when it has no expertise of its own in a subject. McKeown’s dissent in *Ecology Center v. Austin*, 2005 outlines the fault in which the Court went too far and crossed the line into the “decision-maker” and ultimately agency science policy creator.

Before the *Lands Council* series, generally, there was overall a higher standard of deference granted to the agency by the appellate court. In regard to fulfilling the 1982 Forest Planning Rules species viability clause, we saw in *Inland Empire Public Lands Council v. United States Forest Service* (1996), the appellate court affirmed the district court finding in favor of the USDA Forest Service, supporting the methodology. The population viability analysis in this case focused on four sensitive species, in which the agency consulted previous field studies to determine the amount of territory needed for each species, then determined how much impact the project would have on this territory. This is in essence the “habitat as proxy” method. The Court deferred to the USDA Forest Service expertise in this case.

In *Lands Council I*, the USDA Forest Service’s methodology used in its species viability analysis and its soils analysis was deemed unreliable. The species viability analysis utilized “habitat as proxy” methods via an existing database (TSMRS) bolstered with field spot surveys. The soil analysis utilized a spreadsheet model that utilized existing samples taken throughout the

²⁰⁴ Jasanoff, Sheila. 2001. *Judicial Fictions: The Supreme Court’s Quest for Good Science*. Society. 38, 4: 27-36.

²⁰⁵ *Id.* at page 30.

forest. Both of these methods were deemed unreliable and unacceptable because they did not use site-specific surveys or direct monitoring.

In Ecology Center, the USDA Forest Service used models in its soil analysis while also performing on site ground analysis in the project area in addition to multiple site walkthrough's. The majority in Ecology Center deemed these methods inadequate because the USDA Forest Service did not outline the qualifications of the surveyors and determined that the survey was lacking enough data. Judge McKeown accurately states in his dissent that Lands Council I and Ecology Center made "compliance with NFMA and NEPA a moving target."²⁰⁶ In this result, the Ecology Center decision made it so that the Court required the agency to verify its predictions and hypotheses with observations and on the ground analysis to meet the standards of the legislation.

This led to Lands Council II's decision in which the court scrutinized the choice of science of the agency over that presented by the plaintiff, which resulted in the requirement to verify its methodology and the need to address scientific uncertainty. These examples exceeded the arbitrary and capricious standard created by APA §706, to a much more controlling and overarching Court, which then could judge science as technical experts.

Lands Council III reversed the decisions in Ecology Center and Lands Council II and cleared up the role of the Court in judging agency science, resulting in the Court providing its due deference to the agency in its analysis of species viability. The analyzed cases following show that the Court stood by their intentions to judging the agency by the arbitrary and capricious standard of review, restoring a deferential posture applied to the agency.

Following Lands Council III, all cases included in our analysis cited the *en banc* decision. Not all cases resulted in overall high levels of deference but the case acted as a reminder on the bench as to the role of the judiciary. The rollercoaster of disagreement of acceptable methods of science may have slowed following the landmark case.

Agency Science and the Court

"...through years of often acrimonious debate, environmental advocates, timber industry supporters, and government officials have consistently agreed on one principle: federal agencies

²⁰⁶ *Ecology Center v. Austin*, (2005) at 1075.

and other owners of forestlands should base their management decisions on “sound science.”²⁰⁷

What is sound science and how do we ensure that our chosen scientific methodology is reliable? Science is a process. This process is driven by the scientific method, and thus as a part of the scientific method, there is ongoing work to determine if previous results are accurate. Thus, there is a level of uncertainty in scientific methods and the results that we glean from them. Uncertainty to scientists measures the amount of confidence in a specific result. This is contrary to what most believe uncertainty is, relating it to a level of unknowing.²⁰⁸ Gathering more data, creating more precise models, ruling out noise, and making more clear definitions, may reduce the uncertainty, but uncertainty always will exist, as science does not prove anything, it is “fundamentally based on observation”.²⁰⁹ It is understandable why Congress has mandated the use of the “best available science” to agencies in statutes like the Endangered Species Act. The statutes set out to fulfill a goal, using outdated techniques or unreliable conclusions would be counter to that goal. But, science is a continual process with new knowledge, processes and procedures being developed, challenged and accepted. Thus, using the “best available” science aimed at meeting the goals of each law, can be a broad and vague means to fulfill it.

The examples of the varying ways in which the Court can view the agency may add to the increased skepticism of agency science. With various deference regimes, the actions of the agency are viewed differently. This in and of itself results in uncertainty in the methods of the agency, both viewed in the public’s eye and the agency’s. But, overall, the agencies use methods with uncertainty on a daily basis within natural resource management plans, using “decision science”.²¹⁰ Decision science “emphasizes correlative responses” rather than only relying on the scientific method, forming a hypothesis, creating a procedure, and formulating results.²¹¹ This is similar to the use of adaptive management in natural resources management. In this case, utilizing a management plan, for which you determine if there is a positive or negative effect from that plan, with negative results, changes are made. With positive repeated results, similar methods are

²⁰⁷ Rohlf, D. J. (2004). Science, Law, and Policy in Managing Natural Resources: Toward a Sound Mix Rather than a Sound Bite. In K. Arabas, & J. Bowersox, *Forest Futures: Science, Politics, and policy for the Next Century* (pp. 127-142). Oxford: Rowman & Littlefield Publishers, Inc.

²⁰⁸ Sherwin, Brie D. 2014. The Lizard, The Scientist, & The Lawmaker: An Analysis of the Trending Fight Over the Use of Science Under the Endangered Species Act and How to Address It. *Animal Law: Lewis and Clark Law School*; Vol 20, Iss 2: 357-399.

²⁰⁹ Id.

²¹⁰ Sherwin, 2014.

²¹¹ Id.

used to meet the goals of the management plan . This allows for greater flexibility in the management plan and the ability to respond to results faster than continually counting on timely peer review.

Futures Policy Outcomes from Past Examples of the Court

The cases from our analysis show us how varying actions of the Court can result in varying future actions by the agency and policy outcomes overall. The cases discussed in our analysis were governed under the 1982 Forest Planning Rule. The 1982 Forest Planning Rule called for the monitoring of indicator species to ensure viable populations of all species.²¹² The 2012 Forest Rule requires that the agency maintain viable populations for species of concern.²¹³ As described, the 2012 Forest Planning Rule now requires that the “best available science” be used to inform assessments used in the development and revision of project plans and ongoing monitoring.²¹⁴ With this change in forest regulation, there is a goal to allow for greater efficiency in forest planning. There is also the requirement for the use of “best available science”. As discussed the courts have previously struggled with determining their role in judging agency science to determine what is acceptable science. With the new planning rule implemented, the USDA Forest Service is in need of catching up on updating LRMP’s; as of 2012, 68 of the 127 Forest Plans were greater than 15 years old.²¹⁵ These new LRMP’s and specific project plans will need to be in compliance with the best available science standard and the courts will need to decide how they will determine what this is, and whether the current standard of arbitrary and capricious is suitable. We may see varying outcomes if the court changes their standard of review.

The possible outcomes of a standard of high deference may be as follows:

- If high levels of deference are granted to the agency by the court, the agency may be freer to perform “creative” science. This may include more adaptive management where

²¹² Schultz, 2012.

²¹³ 77 F.R. 21175

²¹⁴ 36 C.F.R. §219.6.

²¹⁵ Kelly, Ryan P. and Margaret R. Caldwell. 2013. “Not Supported by Current Science”: The National Forest Management Act and the Lessons of Environmental Monitoring for the Future of Public Resources Management. *Stanford Environmental Law Journal*, Vol. 32:15, 151-212, Pg. 168.

actions embrace the unknown, new techniques, and the implementation of the most recent scientific protocols and theories may be applied to resource management problems.

- If high levels of deference are granted to the agency by the court, the agency may take on a blasé approach to the science they use in their management actions. This may include using older methods or methods that may be considered acceptable but outdated.

In instances of high deference there may be a higher risk tolerance of agency science, thus relying on newer methods. These newer, less tested methods may be based on models or include techniques that are not fully accepted by the science community and may be discounted later. In this instance, there may be a higher issuance of adaptive management. In adaptive management the agency implements a plan, but is able to adjust with negative or positive results of the plan.

High deference may also result in a perceived low risk for the agency, this may allow for the use of “lazy science” or the use of status quo techniques. This policy future may result in little innovation in the agency, not allowing forest projects to flourish or goals reached.

The following policy options may result with consistent low deference ruling:

- If low levels of deference are applied to the agency, the courts may take on the role of experts and become a “science court”. They may become the panel of “experts” and decide what is good or bad science.
- A low level of deference may force the agency to adopt a precautionary approach to management that would favor inaction until uncertainty of action be removed by accumulation of scientific support.
- The agency is on their “best behavior” and uses the most widely accepted methods, but will avoid adaptive management that acknowledges and addresses uncertainty.

In a low deference, low tolerance of risk situation, the court may act as a science court or hire its own scientists to advise them on agency decisions. In this instance, the agency may be required to prove up to the courts standards, both with scientific data and documentation to prove it is reliable. This extensive documentation is both time exhaustive and costly. Some argue that a science court could be beneficial in that it could result in more consistency in court decisions,

while decreasing the caseload on the main stem of the court.²¹⁶

With a low level of deference and low tolerance to risk of agency science, there may be a likely-hood that the court relies on the precautionary principle in agency science. In this case, the agency may only rely on the most confirmed science, and thus the most established to support their forest plans. This would most likely result in inaction in the agency, as the agency is continually in a state of suspended animation, waiting for their revival and time for action.

In an instance of low deference and a high tolerance of risk, the court may still look to the agency, but it would be required to provide an expert witness. In this instance, the court may be applying “regulatory *Daubert*”.²¹⁷ Regulatory *Daubert* combines the Federal Rule of Evidence § 702, which creates a strict reliability test for those testifying as an expert and the judicial rules created by the *Daubert* trilogy of cases.²¹⁸ The court could act as a judge of not only the case, but as a judge of agency experts who may give their opinions.

Overall, these policy outcomes can result in varying futures for science used by the USDA Forest Service. It is an open-ended observation to determine how the agency responds to the Courts deference. As stated, these responses can mold policies by the USDA Forest Service and other natural resource management agencies.

CONCLUSION:

There has been a struggle by the courts to interpret agency actions surrounding public land management, specifically that of the USDA Forest Service. Land management involves significant scientific uncertainty surrounding the knowledge used to comply with the various

²¹⁶ Potter, Kristen. Judicial Review of Forest Service Decisions Made Pursuant to the National Forest Management Act’s Substantive Requirements: Time for a Science Court?. *Journal of the National Association of Administrative Law Judiciary*. Vol 20, Iss 2: 241-262.

²¹⁷ David E. Bernstein. “What to do about Federal Agency Science: Some Doubts about Regulatory *Daubert*”. George Mason University School of Law. *Notre Dame Law Review*.

²¹⁸ The Federal Rule of Evidence states: “A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
 (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
 (b) the testimony is based on sufficient facts or data;
 (c) the testimony is the product of reliable principles and methods; and
 (d) the expert has reliably applied the principles and methods to the facts of the case.” FED. R. EVID. 702. The *Daubert* Trilogy of cases are: *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993); *General Electric Co. v. Joiner*, 522 U.S. 136 (1997); *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

environmental laws that guide land managers. The courts have at times strayed away from the standard from which agency deference is granted under APA; the arbitrary and capricious standard. However, our analysis shows that after Lands Council III, at least in the appellate courts, the level of deference has returned to the early 1990s level. Lands Council III did refocus the efforts of the courts to grant deference to agency interpretation of science.

The new requirement of “best available science” will test the example of Lands Council III. This new, hard-set, but ultimately vague requirement established by the Forest Planning Rules of the National Forest Management Act will test the courts view of agency science and action and what type of deference should be applied to agency decisions. As Forest Plans are updated under this standard and are opposed and objected, the courts will have to determine if the “best available science” requirement is met by the agency. Because the “best available science” requirement of the 2012 Forest Planning Rule was created by the USDA Forest Service, under the definition of Auer deference, they would be granted the authority to classify what the best available science is. According to Justice Scalia’s dissent in *Decker v. Brown*, 2013,

“there is surely no congressional implication that the agency can resolve ambiguities in its own regulations. For that would violate a fundamental principle of separation of powers — that the power to write a law and the power to interpret it cannot rest in the same hands.”²¹⁹

Justice Scalia argues that Auer deference, overall, grants too much power to the agency.

The courts must set a standard for how the “best available science” is to be reviewed. This may mean following the Auer standard of deference, allowing the agency to define “best available science” on their terms, or ratcheting up the scrutiny and applying a low level of deference like that of Lands Council II, or something in between. There are various possible outcomes of which the court may review the agency in the future. Our analysis cannot determine which of these futures may come to fruition or whether the court will continue on its path of the arbitrary and capricious standard. We may only ask which policy of judicial review allows for the most effective natural resource management and how the USDA Forest Service is to determine the requirements of “best available science”. This will also include, determining what is the appropriate level of deference that the USDA Forest Service deserves in review of their effort to produce and commit to the “best available science” in forest plans and projects. The court *and* the agency will have to determine how their science is created and reviewed to fulfill the goals of the statute for the USDA Forest Service to manage the nations forests for all forest uses and all forest users.

²¹⁹ *Decker v. NEDC*, 133 S.Ct. 1326 (2013) at 1340, 1341.

APPENDIX:

Case Year	Citation	Case	Statute	Deference	Outcome
1 1990	914 F.2d 179	<i>Marble Mountain Audubon Society v. Rice</i>	NEPA, CWA	Arbitrary and Capricious Standard (High)	The A.C. reversed and remanded the D.C. decision holding in favor of the USDA F.S.
2 1991	925 F.2d 297	<i>Seattle Audubon Society v. Evans</i>	NFMA, ESA	Auer Deference, Skidmore Deference (Low)	The D.C. held in favor of the plaintiffs, stating that the USDA F.S. must comply with NFMA and ESA to ensure owl population viability. The USDA F.S. was not granted deference to its own interpretation of NFMA. A.C. affirms the D.C.
3 1992	956 F.2d 1508	<i>Idaho Conservation League v. Mumma</i>	NEPA, NFMA	No Deference Regime Described, but (High)	The D.C. granted summary judgment for the USDA F.S., stating the plaintiffs had no standing because they did not show “injury in fact” in regard to the forest plan adopted. The A.C. reversed the D.C.’s decision on standing but held in favor of the USDA F.S.
4 1993	8 F.3d 713	<i>Nevada Land Action Association v. United States Forest Service</i>	NFMA, NEPA	Arbitrary and Capricious Standard (Low)	A.C. determined that the plaintiffs lacked standing to challenge the USDA F.S. LRMP under NEPA. The A.C. affirmed in part and dismissed in part.
5 1993	35 F.3d 1300	<i>Resources Limited, Inc. v. Robertson</i>	NFMA, NEPA, ESA	Arbitrary and Capricious Standard (Mid)	The D.C. held that the plaintiffs had no standing. The A.C. reversed that decision and affirms the D.C. decision that the USDA F.S. EIS was adequate and remand with instructions.
6 1993	992 F.2d 977	<i>Inland Empire Public Lands Council v. Schultz</i>	NEPA, NFMA	Arbitrary and Capricious Standard and Skidmore Deference (High)	The D.C. found in favor of the USDA F.S. upholding the agency decision to not prepare an EIS. The A.C. affirmed this decision. On the claims of the plaintiffs that the USDA F.S. methodology was inadequate, the A.C. specifically noted that the court does not decide between the merits of the agency or the plaintiff. “We defer to agency expertise on questions of methodology unless the agency has completely failed to address some factor.” At 981.
7 1993	46 F.3d 1437	<i>National Audubon Society v. United States Forest Service</i>	NEPA	Arbitrary and Capricious Standard (Low)	The D.C. ordered a permanent injunction on four timber sales until the completion of an EIS. The A.C. reversed the decision to impose a permanent injunction on the timber sales and remanded the case to the D.C.

8	1994	32 F.3d 1346	<i>Salmon River Concerned Citizens v. Robertson</i>	NEPA	Skidmore Deference (High)	The D.C. granted summary judgment in favor of the USDA F.S. The A.C. determined that the USDA F.S. fulfilled its NEPA requirements, stating: "Where the review involves the interpretation of an agency's regulation, we defer to the agency's interpretation unless it is plainly erroneous or inconsistent with the regulation." At 1356.
9	1994	30 F.3d 1050	<i>Pacific Rivers Council v. Thomas</i>	NFMA, ESA	Chevron Deference (High)	The D.C. found in favor of the plaintiffs in part by granting a partial injunction of future timber sales against the USDA F.S in its interpretation of the relationship of LRMP's and ESA. The A.C. affirmed the D.C.'s partial injunction but reverse the decision to not issue an injunction for the current and ongoing timber sales. The Court states "Thus, when Congress's intent is clear, the courts, not the agency, are charged with the basic responsibility for statutory interpretation. A contrary agency interpretation in entitled no deference." At 1054.
10	1996	88 F. 3d 754	<i>Inland Empire Public Lands Council v. United States Forest Service</i>	NEPA, NFMA	Skidmore Deference and Auer Deference (High)	The D.C. held that the USDA F.S. analysis of eight timber sales impact on seven species was sufficient and granted summary judgment for the agency. The A.C. affirmed the decision. The A.C. determined that in regard to methodology choices, the Court should defer.
11	1996	87 F.3d 339	<i>Swanson v. United States Forest Service</i>	NEPA, NFMA, ESA, CWA	Arbitrary and Capricious Standard (High)	The D.C. held that the USDA F.S. EIS for authorized timber sales were not arbitrary and capricious, and granted summary judgment on all claims to the USDA Forest except for the CWA claims. The A.C. affirms the D.C. decision.
12	1996	92 F.3d 922	<i>Idaho Sporting Congress v. Thomas</i>	Rescissio ns Act, APA, President ial directive, Memo of Agreeme nt, and the public trust doctrine	Skidmore Deference (High)	The D.C. granted summary judgment in favor of the USDA F.S. with respect to the seeking of injunction of three projects and seven timber sales. The A.C. affirmed the decision.
13	1997	109 F.3d 521	<i>Oregon Natual Resources Council v. Lowe</i>	NEPA, NFMA	Skidmore Deference, Arbitrary and Capricious Standard (High)	The D.C. held in favor of the USDA F.S., determining that the LRMP fulfilled NEPA and NFMA. The A.C. affirmed. The Court deferred to the scientific interpretations of the USDA F.S.

14	1998	137 F.3d 1372	<i>Neighbors of Cuddy Mountain v. United States Forest Service</i>	NEPA, NFMA	Skidmore Deference and Auer Deference (High Standards, USDA F.S. fail)	The D.C. granted in favor of the USDA F.S. analysis for its EIS of a timber sale. The A.C. reversed and remanded directly to the USDA F.S. and enjoined future logging in the area until the agency is in compliance with NEPA, NFMA, and the forest LRMP.
15	1998	161 F.3d 1208	<i>Blue Mountains Biodiversity Project v. Blackwood</i>	NEPA	Arbitrary and Capricious Standard (Mid)	The D.C. granted in favor of the USDA F.S. in its decision to only prepare an EA and denied the plaintiffs motion for summary judgment and permanent injunction of timber salvage contracts. The A.C. reversed and remanded the decision with instructions for the USDA F.S. to prepare an EIS. Stating: "Although our review under the arbitrary and capricious standard is deferential, it does not condone a "clear error of judgment." At 1216.
16	2000	222 F.3d 552	<i>Friends of Clearwater v. Dombeck</i>	NEPA	Arbitrary and Capricious Standard (High)	The D.C. granted in favor of the USDA F.S. in regard to the USDA Forest Service's refusal to prepare a supplemental EIS for a timber sale. The A.C. determined that at the time, the agency needed a SEIS, but has since evaluated the need for a SEIS. The A.C. affirmed the D.C. decision.
17	2002	303 F.3d 1059	<i>Neighbors of Cuddy Mountain v. Alexander</i>	NEPA, NFMA	Skidmore Deference (Mid)	The D.C. found in favor of the USDA F.S. on the plaintiffs NFMA and NEPA claims. The A.C. reversed the D.C. NFMA finding and affirmed the D.C. NEPA finding.
18	2002	304 F.3d 886	<i>Native Ecosystems Council v. Dombeck</i>	NEPA, NFMA, ESA	Arbitrary and Capricious Standard (Low)	The D.C. granted summary judgment in favor of the USDA F.S. in their approval of a timber sale. The A.C. reversed the holding determining that the USDA F.S. did not consider all impacts of the timber sale to satisfy NEPA and failed to comply with ESA.
19	2002	305 F.3d 957	<i>Idaho Sporting Congress, Inc. v. Rittenhouse</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (Low)	The D.C. found in favor of the USDA F.S. on all claims. The A.C. affirmed in part and reversed in part and remanded to the D.C. with instructions. The A.C. determined that based on the facts of the case, the habitat as proxy method does not comply with NFMA.
20	2003	336 F.3d 944	<i>Selkirk Conservation Alliance v. Fosgren</i>	NEPA, ESA	Arbitrary and Capricious Standard, Skidmore Deference (High)	The D.C. found in favor of the defendants, Stimson Lumber, the USDA F.S., and the U.S.F.W.S. The A.C. affirmed the D.C. decision.
21	2003	351 F.3d 1291	<i>Earth Island Institute v. United States Forest Service</i>	NEPA, NFMA	Arbitrary and Capricious Standard (Mid)	The D.C. denied plaintiffs request for a preliminary injunction of a restoration project that involved two timber sales by the USDA F.S. The A.C. reversed and remanded the decision.

22	2005	395 F.3d 1019	<i>Lands Council v. Powell (Lands Council I)</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (Low)	A.C. reversed D.C. judgment and declared the EIS arbitrary and capricious due to agency methods.
23	2005	418 F.3d 953	<i>Native Ecosystems Council v. United States Forest Service</i>	NEPA, NFMA, APA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (Low)	The D.C. granted summary judgment to the USDA F.S. in regard to its claims against the approval of a proposed project. The A.C. reversed and remanded to the D.C. The Court states: "The Forest Service has failed to provide us with a satisfactory explanation supported by the record showing the necessary rational basis for its hiding cover calculation." At 965.
24	2005	428 F.3d 1233	<i>Native Ecosystems Council v. United States Forest Service</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (High)	The D.C. granted summary judgment in favor of the USDA F.S. in regard to the approval of a proposed project. The A.C. affirmed the D.C. decision.
25	2005	430 F.3d 1057	<i>Ecology Center v. Austin</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (Low)	A.C. reversed D.C. judgment and declared the EIS arbitrary and capricious due to agency methods.
26	2006	442 F.3d 1147	<i>Earth Island Institute v. U.S.F.S</i>	NEPA, NFMA	High	A.C. reversed and remanded to D.C., EIS did not meet requirements to grant a preliminary injunction, U.S.F.S used hard look at NEPA & NFMA
27	2006	451 F.3d 1005	<i>Environmental Protection Information Center v. United States Forest Service</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (Low)	The D.C. found in favor of the USDA F.S. in regard to the EA prepared for a proposed timber sale. The A.C. affirmed the D.C. decision.
28	2006	469 F.3d 768	<i>Pit River Tribe v. United States Forest Service</i>	NEPA, NFMA, APA	Low	A.C. reversed D.C. judgment and declared that the agency did not take a hard look, and the EIS was not adequate.
29	2007	479 F.3d 636	<i>Lands Council v. Martin</i>	NEPA, NFMA	Mid	A.C. affirmed in part, and reversed in part to D.C. Affirm the D.C. denial to a preliminary injunction with claims on NEPA, and reverses the D.C. denial with claims to NFMA.
30	2007	494 F.3d 771	<i>Lands Council v. McNair (Lands Council II)</i>	NEPA, NFMA, APA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (Low)	A.C. reversed and remanded the D.C. decision, and U.S.F.S violated NEPA and NFMA.
31	2007	505 F.3d 884	<i>Oregon Natural Resources Council Fund v. Goodman</i>	NEPA, NFMA	Arbitrary and Capricious, Skidmore Deference, Auer Deference (Low)	The D.C. found in favor of the USDA Forest Service. The A.C. reversed the D.C. decision and remanded back to the court to issue an injunction.

32	2008	537 F.3d 981	<i>Lands Council v. McNair (Lands Council III)</i>	NEPA, NFMA, APA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (High)	A.C. affirmed D.C. Under arbitrary and capricious the court overruled Ecology Center v. Austin as well as Idaho Sporting Congress v. Thomas.
33	2009	574 F.3d 652	<i>Ecology Center v. Castaneda</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (High)	The D.C. found in favor of the USDA F.S. on the plaintiffs NEPA and NFMA claims, the A.C. affirmed the decision. On the population viability claim, the Court states: “This is the sort of scientific prediction to which we give great deference to the agency”. [Habitat as Proxy] Cites Lands III
34	2010	599 F.3d 926	<i>Native Ecosystems Council v. Tidwell</i>	NEPA, NFMA		The D.C. found in favor of the USDA F.S. The A.C. reserved and remanded the D.C. decision in favor of the plaintiff. [Habitat as Proxy] Cites Lands III
35	2010	615 F.3d 1122	<i>League of Wilderness Defenders, Blue Mountain Project v. Allen</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (High)	The D.C. found in favor of the plaintiffs on their claims of the USDA F.S. violation of NFMA and NEPA. The A.C. vacated the D.C. injunction and found in favor of the USDA F.S. Cites Lands III
36	2010	621 F.3d 1239	<i>Hapner v. Tidwell</i>	NEPA, NFMA	Arbitrary and Capricious, Skidmore Deference, Auer Deference (Mid)	The D.C. found in favor of the USDA F.S. in regard to NEPA and NFMA claims. The A.C. affirmed in most claims, but reversed the D.C. holding in regard to the agency’s compliance with an aspect of the forest plan. [Habitat as Proxy] Cites Lands III
37	2010	626 F.3d 462	<i>Earth Island Institute v. Carlton</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (High)	The D.C. granted summary judgment in favor of the USDA F.S. in regard to a post-fire logging project. The A.C. affirmed the D.C. decision. The A.C. emphasized the deference granted to the agency in regard to scientific evidence. Justice Reinhardt dissented. [Species Viability] Cites Lands III
38	2010	629 F.3d 1070	<i>Lands Council v. McNair</i>	NEPA, NFMA	Arbitrary and Capricious Standard, Skidmore Deference, Auer Deference (High)	The D.C. granted summary judgment in favor of the USDA F.S. denying the plaintiffs request for a summary judgment. The A.C. affirmed the decision of the D.C. The A.C. states multiple situations where the agency is entitled to significant deference. [Habit as proxy, “Proxy as proxy”] Cites Lands III
39	2011	646 F.3d 1161	<i>Sierra Forest Legacy v. Sherman</i>	NEPA, NFMA	Skidmore Deference, Auer Deference (Mid)	The D.C. granted in favor of the USDA F.S. on the plaintiffs NEPA claims. The A.C. affirmed this decision but vacated the D.C. permanent injunction and remanded “for analysis without unwarranted deference to Forest Service experts.”. The A.C. determined that the D.C. erred in their NFMA decision in favor of the USDA F.S. but vacated their decision and remanded for further analysis. [Species Viability] Cites Land III

40	2012	689 F.3d 1012	<i>Pacific Rivers Council v. United States Forest Service</i>	NEPA, NFMA	High	A.C. affirms D.C. decision, D.C. did not abuse its discretion, USDA Forest Service allowed deference. Cites Lands III
41	2012	689 F.3d 1060	<i>League of Wilderness Defenders-Blue Mountains Biodiversity Project v. United States Forest Service</i>	NEPA, NFMA	Arbitrary and Capricious Standard (High)	A.C. affirms the D.C. decision. The USDA F.S. was not arbitrary and capricious in its use of science to fulfill NEPA and NFMA. Cites Lands III
42	2012	697 F.3d 1010	<i>Earth Island Institute v. United States Forest Service</i>	NEPA, NFMA	High	A.C. affirmed D.C. the U.S.F.S EA was not arbitrary and capricious. [Habitat as Proxy, "Proxy on Proxy"] Cites Lands III
43	2012	697 F.3d 1043	<i>Native Ecosystems Council v. Weldon</i>	NEPA, NFMA	High	A.C. affirmed D.C. the U.S.F.S EIS was not arbitrary and capricious. [Species Viability] Cites Lands III
44	2014	No. 11-35733	<i>The Pryors Coalition v. Weldon</i>	NEPA	Arbitrary and Capricious Standard (High)	The D.C. found in favor of the USDA F.S. on the plaintiffs NEPA claims. The A.C. affirmed the D.C. decision. Cites Lands III
45	20d.14	No. 13-35817 and 13-35819	<i>Friends of the Wild Swan v. Weber</i>	NEPA, NFMA, ESA	High	A.C. affirms D.C. decision, D.C. did not abuse its discretion, USDA Forest Service allowed deference. [Habitat as proxy] Cites Lands III