

TESTIMONY BY
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The Federal Permitting Process for Major Infrastructure Projects, Including the Progress
made by the Federal Permitting Improvement Steering Council since passage of the
FAST Act in 2015

U.S. Senate Permanent Subcommittee on Investigations

Homeland Security and Government Affairs Committee

United States Senate

July 26, 2017

Thank you for the opportunity to testify today. My name is Scott Slesinger, and I am the Legislative Director for the Natural Resources Defense Council (NRDC). NRDC is a nonprofit organization of scientists, lawyers, and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 2.4 million members and online activists nationwide, served from offices in New York, Washington, Los Angeles, San Francisco, Chicago, and Beijing. I appreciate the opportunity to testify, and hope that my remarks will assist the Subcommittee as it considers the important issues raised by title 41 of the "Fixing America's Surface Transportation Act" or the ``**FAST Act**'.

I would like the Committee to appreciate why the National Environmental Policy Act (NEPA) and the federal permitting requirements to protect our air, water and wildlife are so important. With an emphasis on "smart from the start" federal decision making, NEPA protects our health, our homes, and our environment. Passed by an overwhelming bipartisan majority and signed into law by President Nixon, NEPA has empowered the public, including citizens, local officials, landowners, industry, and taxpayers, and demanded government accountability for more than 40 years. The law was prompted in part by concerns from communities whose members felt their views had been ignored in setting routes for the Interstate Highway System in the 1950s.

NEPA is democratic at its core. In many cases, NEPA gives citizens their only opportunity to voice concerns about a federal project's impact on their community. When the federal government undertakes a major project such as constructing a dam, a highway, or a power plant, or if a private entity needs a federal permit so it can pollute

the air or water, it must ensure that the project's impacts – environmental and otherwise – are considered and disclosed to the public. And because informed public engagement often produces ideas, information, and solutions that the government might otherwise overlook, NEPA leads to better decisions – and better outcomes – for everyone. The NEPA process has saved money, time, lives, historical sites, endangered species, and public lands while encouraging compromise and resulting in better projects with more public support. Our website <https://www.nrdc.org/resources/never-eliminate-public-advice-nepa-success-stories> (copy attached) highlights some NEPA success stories that prove this point. Thanks to this law, tens of thousands of Americans have participated in important federal decisions.

Implementation of the NEPA process has not been perfect. Due to lack of funding, many agencies have had their NEPA staffs decimated. This has led to an over-reliance on consultants instead of conducting environmental analyses in-house. Because agencies must oversee and approve contractors' work, causing further delayed.

There is a persistent but false narrative that NEPA is the primary cause of project delay. This is simply not true. Repeated investigations by the Congressional Research Service underscore both that factors other than federal NEPA reviews are the primary cause of project delays, and how better resource allocation at a federal agency can expedite decision making. The report found that:

“The time it takes to complete the NEPA process is often the focus of debate over project delays attributable to the overall environmental review stage. However, the majority of FHWA-approved projects required limited documentation or analyses under NEPA. Further, when environmental requirements have caused project delays, requirements established under laws other than NEPA have generally been the source. This calls into question the degree to which the NEPA compliance process is a significant source of delay in completing either

the environmental review process or overall project delivery. **Causes of delay that have been identified are more often tied to local/state and project-specific factors, primarily local/state agency priorities, project funding levels, local opposition to a project, project complexity, or late changes in project scope**".¹

The Chamber of Commerce report "Project No Project", contrary to its executive summary, bears this out. (www.projectnoproject.com) Looking at the Chamber's own case studies, it is not federal rules that are causing the delays but state and local laws, zoning, lack of funding, and citizen opposition to projects that, in many cases, are badly thought-out.

NRDC's role in the Portman-McCaskill bill goes back to July, 2013 when I, along with my fellow panelist Bill Kovacs from the Chamber of Commerce, testified on one of the many iterations of House bills to weaken the NEPA process, the RAPID Act. At the hearing, Democratic Rep. Steve Cohen of Tennessee and Republican Rep. Tom Marino of Pennsylvania agreed that we both made good points and that we should sit down and come to an agreement. We had a few discussions but didn't come to agreement. When the Portman-McCaskill bill, which was based loosely on the RAPID Act, moved in the Senate two years later, we again sat down with officials from the Chamber and the Senate and tried to work something out. With significant input from the Administration, NRDC supported the final agreement—although there were many provisions we opposed.

One reform that the Chamber and NRDC both agreed on from the beginning was the need for more funding and more staff to do permitting and environmental reviews. As I mentioned earlier, the loss of agency expertise and the lack of support for NEPA and

¹ *The Role of the Environmental Review Process in Federally Funded Highway Projects: Background and Issues for Congress*, CRS 7-5700, R42479, April 11, 2012.

ii Ibid.

permitting staff in the agencies is responsible for many problems in implementing NEPA. In our eyes, the key reform in the legislation is the authority to use non-appropriated funds to augment agency funds to complete the required reviews. We urge the permitting board to quickly implement a system to collect fees from project sponsors to address bottlenecks by allocating those funds to agencies whose regulatory budgets have been decimated. This is critical because fear of deep cuts proposed by the Trump administration is prompting many qualified staff to leave the federal government.

Additionally, we have all heard the president talk about launching a trillion-dollar infrastructure program. For this to succeed, the permitting board needs close to \$30 million to get up and running. The House Committee's token appropriation to the board of \$1 million is barely enough to hire a few staffers and probably inadequate to carry out its statutory duties in hosting the Dashboard's tracking of projects.

Overall, the many provisions of Title 41 of the FAST Act are still being implemented by the executive branch. If the objective is to improve infrastructure project reviews and permitting, then right now Congress' most important challenge is to exercise oversight over implementation. While we don't applaud everything in the law, its robust provisions were enacted less than two years ago, and so are settled law. Adding to the law would exacerbate effective administration of it. For example, the DOT's Inspector General confirmed that agency has been hamstrung by repeated policy changes in recent Congresses. Although DOT had completed most of the reforms mandated by MAP-21 in 2012, the Department was forced to delay further implementation of others because they must be revised to comply with additional requirements of 2015's FAST Act.² Further revisions or regulatory changes as the Administration implements FAST-41 will only add

² Office of the Inspector General, *Vulnerabilities Exist in Implementing Initiatives Under MAP-21 Subtitle C to Accelerate Project Delivery*, March 6, 2017, available at: <https://www.oig.dot.gov/sites/default/files/DOT%20Implementation%20of%20MAP-21%5E3-6-17.pdf>

confusion and delay implementation of it.

On the other hand, testimony at regular intervals from Administration staff about plans and progress in implementation is warranted. Such oversight would help to improve coordination between agencies, which can break down and slow a process down. As a seasoned NEPA practitioner quipped in a recent Duke University report - based on interviews of 15 experts in a dozen federal agencies –

“Lack of communication and collaboration between federal agencies, with the public, and among decision-makers is 95% of what is wrong with NEPA implementation...”³

The permitting board needs strong leadership to improve the permitting process. We applaud Senator Portman’s and Senator McCaskill’s letter urging the President to quickly appoint an executive director. This law gives the executive director significant authority. The person selected must have the political skills to bring the siloed interests within the federal family together—not just to make a faster system, but one where the environment outcomes are better. Leaving in place an acting executive who is not a political appointee, despite her skill, undercuts the Board’s ability to get significant cooperation from department and agency leaders.

I would also note that the permitting process and NEPA are complicated area of multiple scientific disciplines and the law. The executive director must have broad experience and sufficient qualifications to successfully lead in the implementation of this statute.

Despite the enactment of this legislation in 2015, we are very concerned with the number of bills in both houses of Congress that would further amend the NEPA process without regard for their impact on process changes already made in Fast-41. If these bills

³ <https://dukespace.lib.duke.edu/dspace/handle/10161/11874>

became law, instead of making things simpler, they would create new conflicts, sow confusion, and delay project reviews, all of which would unfairly be blamed on NEPA, even though the real culprit is Congress passing contradictory legislation.

Legislation has reached the House floor to establish a different permitting and NEPA process for hydroelectric power projects, water supply projects, natural gas pipelines, international pipelines, fisheries management, and several others—all inconsistent with each other. The President Trump's Infrastructure Permitting Executive Order - as Senators Portman and McCaskill wrote the President - also contradicted authorities and responsibilities already in FAST-41, to the consternation of the project sponsors that were already participating in the Permitting Board's process. Maybe this hearing and sustained oversight by this Committee will educate Congress and the public of this new law and the adverse consequences of moving on other legislation that will make the environmental and permit system worse.

I want to thank Senator Portman and Senator McCaskill for considering and accepting many of our changes to your early drafts of what became of FAST-41. We support your current efforts to ensure that your legislation improves the quality of reviews and leads to better environment outcomes without unnecessary delays.

NRDC stands ready to assist this Committee in its further deliberations. Thank you again for the opportunity to participate in this hearing and look forward to your questions.

Attachment

NEPA Success Stories

Alabama

Choctaw Point Shipping Terminal

In early 2000, Alabama sought to revive its Choctaw point shipping port terminal. Business at the port had changed since its dedication in 1928 such that it was no longer adequate for modern shipping needs. In 2001, the Army Corps of Engineers submitted a project proposal to upgrade the port with a modern, world-class container handling facility that would meet current needs. During the NEPA process, the Corps discovered that it needed to modify the original berthing configuration to avoid posing navigational safety issues to ships. Further, the review helped the Corps improve overall operational efficiency in the intermodal rail yard, intermodal container yard, and traffic control areas, reduce the port's environmental effects, including its impact on wetlands, and increase mitigation efforts. Today the terminal forms an important part of the Port of Mobile, Alabama, which provides over 120,000 jobs.

Arizona

Hoover Dam Bypass

The Federal Highway Administration (FHWA) developed the 3.5-mile Hoover Dam Bypass project, which would stretch from Clark County, Nevada, across the Colorado River to Mojave County, Arizona, to address increased congestion at the Hoover Dam crossing. However, the environmental impact statement for the project failed to explore an adequate variety of options. Project manager Dave Zanetell admitted as much, stating that the FHWA had "grossly underestimated some of the alternatives and too quickly dismissed them." To ensure full NEPA compliance, Zanetell's team more thoroughly researched an alternative proposed by environmental groups and added some important features to the project in response to public comments. In its final form, the bypass, which opened in October 2012, runs closer to developed areas instead of cutting through pristine corridors; it also includes accommodations such as sidewalks, pedestrian facilities, and parking to enable pedestrian access. "Oftentimes the public is a huge influence on the project. NEPA is certainly the foundation for public participation," said Zanetell. "We don't look at it as a burden; it is something we relish," he added.

Arkansas

Shady Lake Recreation Area

In 2011, the Forest Service proposed to construct a new entrance road to the Shady Lake Recreation Area in Arkansas' Ouachita National Forest to improve visitors' experiences, provide safe vehicular access to the Shady Lake Recreation Area, and minimize conflicts with residents living nearby. While the Environmental Assessment proposed to wait to open the new entrance to visitors until the project was complete, thanks to NEPA, the Federal Highway Administration and Forest Service put their heads together to reach a better solution. They decided to open the new entrance road to public traffic upon completion of the project's first phase, ensuring that visitors could access the area and that nearby residents would benefit from diminished traffic as soon as possible.

California

Bolinas Lagoon

In California, the NEPA review process exposed the devastating impacts of the Army Corps of Engineers' plan to dredge the Bolinas Lagoon, one of the most pristine tidal lagoons in the state. While the proposal aimed to prevent silting in the lagoon, environmental reviews actually found that it would increase siltation. As a result, this misguided plan was abandoned in 2001, saving taxpayers \$133 million.

Crenshaw/LAX Transit Corridor

The Los Angeles County Metropolitan Transportation Authority's (LACMTA) Crenshaw/LAX Transit Corridor project is an 8.5-mile light-rail metro extension that will serve the cities of Los Angeles, Inglewood, Hawthorne, and El Segundo by offering an alternative transportation option to congested roadways. The project was one of the Federal Transit Administration's first projects piloting a new process that helped identify and mitigate project risks more efficiently. Through the project review process, the LACMTA determined that a five-mile stretch of the project could utilize a rarely-used existing freight rail line corridor, instead of building new tracks in that section. The railroad agreed to abandon the line and allow LACMTA to use it. That decision decreased project costs, saved time, and reduced disturbances for the nearby community by using an

existing right-of-way, while providing significant environmental benefits, economic development, and employment opportunities throughout Los Angeles County.

Colorado

I-70 Mountain Corridor

For years, the I-70 Mountain Corridor, which runs from Denver, Colorado to Glenwood Springs, experienced hours of congestion -- particularly on weekends -- as travelers accessed ski areas, hiking areas, and other recreational destinations in the Rocky Mountains. Initial plans for improving the corridor's capacity and mobility included blasting through cliff, building unattractive retaining walls, and channeling the Colorado River. For these reasons and others, the majority of stakeholders, did not support the plan. So, the Colorado Department of Transportation (CDOT) used NEPA to initiate a collaborative decision-making process to identify a new reconstruction plan. Thanks to NEPA-generated public input, CDOT chose a plan that was not only safer than the original one, but also had fewer impacts on the environment and river. The project has since won more than 30 awards for innovative design and environmental sensitivity.

North Fork Valley

In late 2011, the Bureau of Land Management (BLM) announced its intention to lease approximately 30,000 acres of public and private lands in Colorado's North Fork Valley for oil and gas development. Yet, a wide range of stakeholders, including farmers, conservationists, wineries, ranchers, ditch companies, chambers of commerce, local and state politicians, and hunters and fishermen, felt the plan was ill-conceived, unnecessary, and ignored the North Fork Valley's economic and environmental attributes. In particular, stakeholders were concerned about the proposal's affects on the area's economy, which depends largely on orchards, vineyards, meat production, and tourism. Using NEPA, this diverse coalition of people negatively affected by the proposal were able to voice their concerns. BLM listened and, in the end, deferred the parcels.

Canyons of the Ancients National Monument

Created in 2000 by President Clinton, Canyons of the Ancients National Monument in

southwestern Colorado contains over 6,000 archaeological sites representing Ancestral Puebloan and other Native American cultures. As a result of the designation, the existing oil and gas leases on the land were permitted to run their course, but would not be renewed after their current term expired. On the eve of the lease's expiration, the lessees proposed a new seismic exploration project for the land. However, the Bureau of Land Management's (BLM) Environmental Assessment was based on inadequate cultural resource surveys, and, as a result, allowed exploration on the edges of several sensitive sites, including standing "towers" and multiple collections of artifacts. In an effort to protect these irreplaceable areas, a coalition of groups led by San Juan Citizens Alliance, filed suit in federal district court and were granted an emergency injunction. Negotiations between all stakeholders ensued, with conservation groups, BLM, and the lessees coming to the table to work out a compromise. The result: an exploration project that enabled lessees to obtain the seismic information they needed while avoiding the National Monument's most significant cultural features and fragile habitats. All in all, it was a win-win that balanced energy exploration with cultural resource protection, and exemplifies effective multiple use management of the public lands.

State Highway 9

When considering improvements to a 9-mile stretch of State Highway 9 (SH9) between Frisco and Breckenridge, Colorado, the Colorado Department of Transportation and the Federal Highway Administration used NEPA to help meet project goals of improving safety and mobility on a budget. The selected alternative proposed a four-lane reduced section roadway including necessary turn lanes, acceleration and deceleration lanes, curbs and gutters, medians, and shoulders between milepost 97 and milepost 85. This alternative was selected through the public comment process and interagency involvement fostered by NEPA because it offered a way to achieve project objectives while minimizing the physical impacts on the environment. In the end, the project included wider shoulders for cyclists, bus priority signals, ways to minimize dust emissions during the construction process, wetland mitigation, minimization of tree removal, and a bridge over Blue River to avoid wildlife damage. Additionally, the final project ended up costing less than the original plan!

Grand Mesa, Uncompahgre, and Gunnison National Forests

In 1989, the Forest Service released a draft environmental impact statement for its plan to clearcut every aspen grove in the Grand Mesa, Uncompahgre, and Gunnison National Forests in western Colorado in order to supply a waferboard plant operated by Louisiana Pacific Corporation. The plan was met by outrage from the public, who argued that scenery, wildlife habitat, and water quality in the forests are essential to the region's quality of life and tourism-recreation economy. After receiving a record-setting number of letters during NEPA's public comment period from private citizens, businesses, and local officials, the Forest Service substantially scaled back its clearcutting proposal. Forest Service rangers and scientists acknowledged that the initial proposal was more than the land could bear but said they had felt pressured to "get the cut out." Absent the NEPA public review process, hundreds of thousands of acres of majestic Rocky Mountain landscapes would have disappeared.

Connecticut

Plum Island

The Department of Homeland Security (DHS) had a terrible idea: expand a scientific lab on Plum Island, just eight miles off the Connecticut coast, so it could start handling some of the most dangerous and deadly pathogens known to man, including pathogens transmitted from animals to humans that have no known cures or vaccines. While Plum Island had long hosted research into animal disease, the new facility would have taken the public health threat to a new level. However, the environmental impact statement (EIS) that DHS completed under NEPA failed to address the risks that this facility could pose to the 20 million people who live within 50 miles of Long Island Sound. Senator Blumenthal, who was then Connecticut Attorney General, was able to use NEPA to challenge the government's proposed plan on the basis that it failed to assess the intolerable security risks in an area so densely populated, heavily traveled, and environmentally valued. For example, the EIS did not address the proximity of Plum Island to New York City -- the nation's most populous city and a repeated target of terrorist attacks -- or the extreme difficulty of providing emergency response services to an island. Result: DHS reexamined alternatives and relocated the laboratory to Kansas, far from major population centers,

where the governor welcomed the facility.

Delaware

Mid-Atlantic Power Pathway (MAPP)

PJM Interconnection, a regional transmission organization, planned to build a 150-mile transmission line in parts of Delaware, Maryland, and Virginia called the Mid-Atlantic Power Pathway (MAPP). This high-voltage transmission line would have connected Calvert County, in Southern Maryland, to the Indian River power plant in Delaware, by way of the Chesapeake Bay, and up the Choptank River. Local residents strongly opposed the poorly planned project, which would have traversed sensitive areas and contributed to a number of health problems, including increased risk of childhood leukemia associated with living near high-voltage transmission lines and respiratory illness associated with increased air pollution from nearby coal plants. Using NEPA, residents voiced their concerns, resulting in a number of proposed project alternatives that would make everyone happier. Eventually, PJM decided to terminate the project, citing the economic downturn and the installation of new gas-fired power plants as their main reasons.

Florida

Lake Belt EIS

In 2000, the Army Corps of Engineers conducted an environmental review for what would eventually total over 5,700 acres of limestone mining permits in the Lake Belt region of Miami-Dade, Florida. However, their Environmental Impact Statement (EIS) relied entirely on industry information, failing to consider the risk of contamination to the surrounding wetlands, which provide drinking water to over 1 million South Florida residents.

Regardless, the Army Corps went ahead with the project. By the time the environmental review was determined to be unlawful and the mining stopped, blasting agents used for the mining had caused benzene — a carcinogen — to leak into local water supplies.

Subsequently, the Corps undertook a much more comprehensive supplemental environmental review of the project, providing better mitigation and protection of wetlands and local wells and requiring miners to switch explosives. Had the Corps used NEPA

properly from the beginning, they would have likely required use of alternative explosives from the start, drinking water contamination could have been avoided, and the funds required to clean up the contaminated wells would have been saved.

Scripps Florida Research Institute Project

In October 2003, Palm Beach County and Scripps Research Institute jointly developed plans for a Biotechnology Research Park to be built on the Mecca Farms site -- a 1,919 acre parcel in rural western Palm Beach County. The County and Scripps sought a Clean Water Act Section 404 permit from the Army Corps of Engineers to fill wetlands at the Mecca Farms site so they could build there. And in February 2005, the Corps issued the permit, along with an Environmental Assessment (EA) under NEPA, concluding there were no significant environmental impacts associated with filling the wetlands. However, it was soon discovered that the Corps' environmental review had been limited to only 25 percent of the 1,919 acre Mecca Farms site. Based on this finding, in 2005, a court held that the Corps' issuance of the permit had violated NEPA and the Clean Water Act and ordered the Corps to prepare an environmental review of the entire Mecca Farms site, as required by law. During the comprehensive evaluation process that ensued, the County and Scripps decided to move the research park to a location that would save money by utilizing existing access roads instead of having to build new ones, as they would have been forced to do on the Mecca Farms site. Building on the new site would also result in fewer environmental impacts.

Port St. Lucie Crosstown Parkway Extension

In 2004, Port St. Lucie, Florida was the fastest growing city in the nation. After several years of unprecedented growth, the area had greatly exceeded its transportation capacity. For this reason, the Federal Highway Administration (FHWA), in conjunction with the Florida Department of Transportation (FDOT), proposed a highway expansion project to relieve high traffic congestion. Specifically, FHWA and FDOT proposed to build a bridge for an existing six-lane highway to cross the St. Lucie River's North Fork, thus providing a crosstown connection between U.S. 1 and I-95. In accordance with NEPA, the agencies prepared a draft Environmental Impact Statement (DEIS) and accepted public comments.

After examining six different locations and a no build alternative, the agencies identified Alternative 1-C as the preferred alternative: a six-lane divided highway with two bridge structures designed to support automobile, bicycle, and pedestrian traffic. While this alternative was generally supported by the community, many commenters used the NEPA process to urge the agencies to adopt certain measures to mitigate the project's environmental and community impacts. Based on these comments, FHWA and FDOT modified the plan so that it ultimately resulted in zero commercial relocations, fewer residential relocations, less residential noise, and fewer wetland impacts. The NEPA commenting process provided the agencies with the tools to develop an alternative that best balances local impacts with environmental concerns, resulting in a final project with strong community support and a better environmental outcome.

Georgia

Savannah Harbor Expansion

The Savannah Harbor Expansion Project calls for the deepening the Savannah Harbor navigation channel from 42 feet to 47 feet to accommodate larger ships coming through the expanded Panama Canal. The original plan would have pushed salt water upstream, threatening the vitality of the Savannah National Wildlife Refuge's valuable tidal freshwater wetlands. Additionally, the plan would have further endangered the federally protected shortnose sturgeon, negatively impacted local drinking water resources, and forced the City of Savannah to move its drinking water intake. Thanks to NEPA, an agreement was reached that directed funds towards wetlands protection and restoration efforts that benefit the Savannah River, supported water quality monitoring of the Savannah River and shortnose sturgeon, and started an initiative to restore certain river bend "oxbows" cut off from the river by earlier Corps navigation projects between Augusta and the Houlihan Bridge above Savannah to improve water quality, boost fishing and recreation opportunities, and help to restore the river's natural ecosystem.

Atlantic Steel Redevelopment Project (Atlantic Station)

In 1998, and contaminated land in the heart of metropolitan Atlanta. Shortly thereafter, a developer came forward with a plan to redevelop the site into a multi-use residential

community for approximately 3,000 individuals. In compliance with NEPA, the EPA, consulting with the Federal Highway Administration and the Federal Transit Administration, conducted an environmental assessment in August of 2000. During the public comment process, local citizens filed 255 comments identifying several concerns about the project, including the belief that it would create traffic congestion and have negative impacts on historic properties. As a result, 15 historic architectural sites were identified, listed in the National Register of Historic Properties, and preserved under the supervision of an archaeological consultant. The comments also prompted significant design modifications to reduce traffic congestion and increase the project's transportation connectivity. The development is now easily accessible from two major interstates and a nearby public transit station, in addition to being pedestrian and bicycle friendly. The EPA estimates that the modifications to Atlantic Station reduced residents' number of vehicle miles traveled by 34 percent and resident's car emissions by 45 percent. The NEPA commenting process was vital in making these improvements.

Northwest Corridor Project

In 2007, the Federal Highway Administration and Georgia Department of Transportation (GDOT), in cooperation with other state and federal agencies, proposed to expand I-75 and I-575 in the Atlanta metropolitan area's Northwest Corridor to alleviate traffic congestion. The initial plan proposed to expand sections of the interstates to ten lanes by adding four general-purpose lanes. Community members used the NEPA process to express environmental, public health, and economic concerns about the project, which ultimately motivated GDOT to improve the plan. The final plan will convert existing medians and road space on I-75 into reversible HOV traffic lanes instead of adding lanes. This simple change will minimize adverse effects on low-income and minority communities by reducing the number of residences and businesses displaced by the project from over 300 to 18. This modification will also reduce the acres of wetlands impacted from 4.2 to 0.3, protecting endangered species. And, to top it all off, the project modifications will save a significant amount of money. While any project of this magnitude will inevitably affect the surrounding environment, thanks to NEPA, the Northwest Corridor Project has fewer impacts on local homes, businesses, and the environment, and is more cost effective than

the original plan.

Hawai'i

Advanced Technology Solar Telescope (ATST) at the Haleakala High Altitude Observatory Site on the Island of Maui, Hawai'i

The National Science Foundation (NSF) proposed to build the Advanced Technology Solar Telescope, which will be the world's largest optical solar telescope, in order to research solar activity that no other existing or proposed telescope can. To achieve the best functionality, the NSF planned to locate the telescope atop the summit of Maui's Haleakala Volcano. Many Native Hawaiians expressed concern as the volcano is a very important cultural site for them. NSF used the NEPA and local procedural laws to engage in extensive discussion with local communities and other agencies on possible alternatives and methods of mitigation. In the end, NSF agreed to not only undertake a collection of mitigation measures during construction and operation of the telescope in order to be as unintrusive as possible, but to also deconstruct the telescope and divest itself from the area once the research project is completed. Construction of the telescope is currently in progress.

Idaho

Lakeview-Reeder Roads Project

In Idaho, the Forest Service proposed the Lakeview-Reeder Roads project to improve fish passage in Priest Lake and reduce sedimentation. Public participation in the plan's NEPA review brought a mistake to light, thereby preventing possible litigation and a waste of taxpayer money. Specifically, a public comment identified a discrepancy between the planned buffer zone for the protection of the endangered boreal toad and the federal requirement for such a zone. In response, the Forest Service redesigned the road to adequately protect the species. By informing the public of its plan and listening to citizen comments, the Forest Service avoided irretrievably committing taxpayer dollars to a project that violated federal laws and might have led to litigation.

Illinois

Chicago Harbor Lock Gates

An Army Corps of Engineers plan for repairs to existing breakwaters and replacement of the lock gates of Chicago Harbor in Lake Michigan was greatly improved when NEPA revealed a better method of repairing and extending the life of the breakwaters at a fraction of the replacement cost. The NEPA analysis also verified the need to replace the Chicago Harbor lock gates to ensure their flood-control reliability.

Building 330 at Argonne National Laboratory

In 2009, the Department of Energy (DOE) proposed to demolish Building 330, which housed the decommissioned Chicago Pile-5 research nuclear reactor at Argonne National Laboratory in Illinois. The DOE used the NEPA process to ensure the demolition, which included the removal and transport of radioactive and toxic waste, did not harm the surrounding community and environment. Specifically, the DOE used NEPA to bring together operational and environmental expertise to develop demolition and transportation approaches that better protected workers and the public from potential hazards. For example, the final project mandated that air monitoring be performed at the building site during demolition to ensure that the public would not be exposed to dangerous levels of radionuclides. It also required airborne contamination controls such as filters and barriers, along with personal protective equipment like respirators, to ensure the safety of the demolition workers.

Indiana

Flagship Enterprise Center

In Anderson, Indiana, NEPA facilitated proper planning of a 2.7 million dollar project to build the Flagship Enterprise Center -- a 80,000 square foot technological business incubator. Through NEPA's environmental review process, the project applicant became aware of the project's impacts on the area's forested wetlands, which are used by migratory waterfowl. As a result, provisions were added to the project to preclude negative effects on wetland hydrology, prevent stormwater runoff from being directed to the wetland, and provide retention facilities to contain stormwater within the current footprint of the project site. Additionally, a 26.5 acre forested wetland southwest of the Flagship

Enterprise Center was protected.

Iowa

Southeast Connector U.S. 65

Iowa's Southeast Connector project will link the local Martin Luther King parkway in Des Moines to U.S. Highway 65. The Federal Highway Administration, Iowa Department of Transportation, and City of Des Moines worked alongside other agencies and local communities through the NEPA process to identify issues with the original proposal that might have led to damage to the nearby levee. Other improvements included consideration of previously-unidentified hazardous material sites, improved wetlands mitigation, and better efforts to engage Spanish-speaking communities affected by the project. Construction for the project began in 2012.

Kansas

John Redmond Dam and Reservoir

The U.S. Army Corps of Engineers built the John Redmond Dam and Reservoir for flood control, water conservation, recreation, and water supply. However, sediment built up 80 percent faster than anticipated in the pre-NEPA project, requiring the Corps to fix the problem in order to meet its local water supply requirements. During the NEPA process, other agencies discovered that the proposed raising of the conservation pool would inundate hundreds of acres of nearby wildlife refuge areas, posing a risk to both protected wildlife and deer and turkey hunting, and destroy the one of the only local boat ramps to the lake. The Corps was able to work with the state to replace both the ramp and wildlife areas and minimize environmental impacts, and is continuing to work with both local and federal interests to make sure the reservoir meets local needs.

Kentucky

Paris Pike

Kentucky's Paris Pike is a scenic road between Lexington and Paris that runs for 13.5 miles through rolling hills dotted with historic thoroughbred farms. However, its beauty was overshadowed by congestion and safety hazards, such as a lack of passing and turning

lanes. The Kentucky Transportation Center (KTC) proposed building a standard four-lane highway but faced opposition from local communities concerned about irreparable harm to the historic corridor's natural landscape. A judge agreed with the communities and instructed KTC to return to the planning process and seek a workable alternative. As a result, KTC and community members decided on a design that fit the aesthetics and contours of the land while minimizing environmental impacts. The new design, which has won national awards, added a shoulder; preserved existing trees, fences, and stone walls; and installed additional walls and guardrails to increase safety and enhance the highway's aesthetics. The new design also converted a historic farmhouse into a visitors' center, generating tourism dollars for a town that would have lost money if the original project had been implemented. "It has been an immensely successful project," said Cumberland Sierra Club chapter chair Lane Boldman. "It preserved aesthetic integrity while doing what it was supposed to do: increase safety and capacity. It has significantly improved the corridor." Local resident Hank Graddy said the NEPA process was essential, noting that it "brought people and ideas to the table that otherwise would not have been there." Paris Pike represents a true compromise facilitated by the NEPA process: road expansion without accompanying aesthetic and natural destruction.

Louisiana

Bastrop Senior Housing Project

Built in 1927, Bastrop High School is a sprawling, two-story, brick Tudor Revival structure located just outside downtown Bastrop, Louisiana. After serving as an education center for six decades, the building fell into disrepair. Rains from Hurricane Katrina led to roof leaks, causing further deterioration of the historic structure. In 2009, a number of partners including the Department of Housing and Urban Development raised funds to convert the building into 76 affordable-housing units for elderly individuals. The NEPA review process helped identify numerous issues with the historic building that, if left unaddressed, could have endangered the lives of the building's future occupants; these included structural instability, lead-based paint, asbestos, and lead-contaminated water pipes. The final project design incorporated solutions to these problems, ensuring the safety of the senior citizens who would soon call the building home, while preserving and restoring the

building's historic features such as its original redbrick exterior. The project also benefited the community by converting a public nuisance into a facility that locals believe will contribute greatly to the town's downtown redevelopment plan and attract investors to the area, which lost its major employer, International Paper, in 2009.

Maine

Acadia National Park's Park Loop Road

In developing a project to repair damaged culverts and headwalls along Acadia National Park's Park Loop Road in Maine, the National Park Service realized that one of the culverts to be repaired spanned Hunters Brook, a high-quality trout fishery. At this culvert, paving stones had been used to armor the stream bank in the past. However, due to stream movement and erosion over the years, the stones had fallen into the stream channel, causing additional erosion and sedimentation of the trout stream. Through the NEPA scoping process, which included consultation among various state and federal agencies, an alternative emerged that will restore the health of Hunters Brook and the trout that live there while preserving the historic character of the nationally-recognized Park Loop Road. If not for the NEPA and permitting processes, the agencies would have likely just replaced the paving stones, providing a short-term fix that would have required future repairs and done nothing for the fishery. But thanks to this law, the relevant stakeholders developed an innovative approach that will restore the health of the stream in the long term, contribute to the trout fishery, and enhance park visitors' experience.

Umbagog National Wildlife Refuge Final Comprehensive Conservation Plan and EIS

Over the last decade, the economy and landownership patterns of the communities surrounding New Hampshire and Maine's Umbagog National Wildlife Refuge have changed and public access pressures have increased. For this and other reasons, the U.S. Fish and Wildlife Service (FWS) felt it was necessary to develop a master plan for the refuge, which would provide a 15-year strategic guide for conserving land, helping FWS determine how to expand the refuge and where to locate a new refuge headquarters and visitor's center. During the NEPA process for the plan, the community expressed interest in new public uses of the refuge, including dog-sledding, horseback riding,

bicycling, and increased boat access, all of which FWS incorporated into the plan. FWS also expanded hunting opportunities on the refuge in response to the public's request to hunt turkeys there. The final plan balances conservation and public use, while also identifying areas for expansion. In 2012, as the refuge moves towards its acreage goal with conservation purchases and easements, refuge manager Paul Casey said, "This project is an excellent example of what can be accomplished through partnerships. By working with the forest industry, private conservation organizations, and the state, we have been able to craft a broad scale conservation effort that meets each of the partners' needs."

Maryland

Maryland Oyster Restoration

When first proposed about a decade ago, it seemed like a promising means to revive the Chesapeake Bay's devastated oyster crop: bring in Chinese oysters, which are impervious to the diseases killing the native stock and also grow faster. If successful, the plan would resurrect an oyster industry that had almost been wiped out. But under NEPA, a major step such as introducing an alien species into an ecosystem requires a thorough environmental review by the federal government. More than 2,000 comments poured into the U.S. Army Corps of Engineers. Scientists, federal agencies, and other coastal states raised numerous red flags about the Chinese oysters' potential dangers, many of which are irreversible, including harm to the remaining native stock and possible threats to human health. After carefully weighing all the evidence, and considering a number of alternate solutions, the Corps ruled that the Chinese oysters posed "unacceptable ecological risks." Result: a reinvigorated effort to bring back the native oyster species, which so far seems to be paying off. Indeed, fall oyster survey results released by the Maryland Department of Natural Resources in April 2013 showed population and reproduction increases for the second year in a row.

CSX Corp. Transportation Facility

When CSX Corp. wanted to relocate an existing freight container transportation facility in downtown Baltimore to Elkridge, Maryland, it triggered a federal environmental review

under NEPA to assess the impact that a new 24/7 operation visited by 300 trucks a day would have on the small city. During the extensive public comment period, Elkridge citizens expressed concern that the facility would be too close to a planned middle school and would undermine their quality of life and the environment. As a result, CSX worked with Maryland Governor Martin O'Malley and Baltimore mayor Stephanie Rawlings-Blake to find a more appropriate site for the facility. In the end, CSX relocated its project to an existing South Baltimore rail yard site that CSX already owns—a plan that has received broad community support and will expand the economic and job-growth potential for the Port of Baltimore, which currently generates more than 14,000 direct jobs and \$5 billion annually. Thanks to NEPA, a more suitable location was found and between \$50 and \$240 million will be saved.

Massachusetts

Route 146

Route 146 runs through an area of central Massachusetts rich with American history, industrial development, and growing communities. The Federal Highway Administration's \$290 million proposal to transform Route 146 and improve travel would have expanded a section of a two-lane, unlimited-access road into a four-lane divided parkway, modifying major interchanges and bridges in the process. To integrate NEPA principles into the process, the Massachusetts Highway Department (MassDOT) established a Citizens Advisory Committee of local business owners, residents, political leaders, environmental groups, and representatives from federal and state agencies to help inform the final design. The final plan links towns to the highway and the history of the Blackstone River, while enhancing natural and historic resources. For example, the project includes construction of a bike path through the corridor, building preservation, historic bridge restoration, stormwater and wetlands mitigation, and creation of wildlife passages. George Batchelor of MassDOT said the Citizens Advisory Committee was "a meeting of the minds" ensuring that "what was done was done properly." Without the input of citizen groups, the road design would not have addressed the region's historic and environmental resources. Local leaders hope Route 146 will become a renowned historic parkway that will attract tourism.

Michigan

US-23 Improvements

The Michigan Department of Transportation (MDOT) pushed for the construction of a four-lane freeway parallel to the existing two-lane US-23 for close to a decade. The expansion would have rerouted US-23 through undeveloped country in the northeastern part of the state, causing the largest single wetlands loss in Michigan and severely compromising protected wildlife habitat, state and national forestland, coastal wetlands, and the Au Sable River Corridor. Residents opposed the expansion, instead preferring to fix the existing highway by adding passing lanes and making other safety improvements. "Right from the start, that was our whole focus: Fix what we have and don't build a new, billion-dollar freeway," said Paul Bruce, founder of People for US-23 Freeway Alternatives, a citizens' group in Alpena. MDOT issued a draft environmental impact statement in 1995 that considered only two choices: Build the extension or do nothing. Upon discovering this failure to fully analyze alternatives to new construction, the Federal Highway Administration stepped in. It rejected the proposal, directed MDOT to upgrade the existing highway or study the creation of a less-damaging boulevard, and recommended resident-supported alternatives such as the addition of passing lanes and turn lanes and traffic signal upgrades. Kelly Thayer, transportation project coordinator at the Michigan Land Use Institute, said the intervention was a huge success. "NEPA kept alive the public's opportunity to give input," said Thayer. Due to the NEPA process, these communities will be spared the devastating impacts of unneeded and unwanted expansion. And in the end, an eye-popping \$1.5 billion will be saved.

Midland Manufacturing Facility Construction

In 2010, the Department of Energy (DOE) proposed construction of a manufacturing facility for vehicle batteries and hybrid components in Midland, Michigan. Through the NEPA process, the DOE became increasingly aware of potential safety issues related to dioxin contamination of the soil at the site from past manufacturing activities there. Dioxin can cause reproductive and developmental problems, damage the immune system, interfere with hormones, and cause cancer. As a result, the DOE incorporated measures into their plan to minimize the risk of exposing workers and children at the nearby daycare

facility to contaminated soil during construction. These included more rigorous management and monitoring of fugitive dust emissions at certain times, temporary relocation of daycare services on days of exposure, scheduling construction around daycare operations, and temporary enhanced air filtration during construction.

Minnesota

Central Corridor Light Rail

The Central Corridor Light Rail is a 10.9-mile light rail transit line connecting downtown Minneapolis and St. Paul. Running along University Avenue for most of the route, the project includes the construction of 18 new stations and is expected to cost \$1 billion by completion in 2014. In January 2011, the National Association for the Advancement of Colored People (NAACP) filed suit against the U.S. Department of Transportation (DOT) and the Metropolitan Council (the regional transit authority) claiming that the final environmental impact statement for the project was inadequate, in part because it failed to analyze the short-term impact of project construction on surrounding businesses. Specifically, the businesses were concerned with the project's removal of street parking, which would prevent customers from patronizing their stores, negatively affecting their revenues.

In response, the DOT used NEPA to hold town meetings, hearings, and otherwise engage the community, resulting in a supplemental environmental assessment that suggested a range of mitigation measures to help small businesses affected by construction activities. In total, the Metropolitan Council, City of St. Paul, City of Minneapolis, Metro Transit (the regional transit authority), and contractor committed nearly \$15 million to helping small, local businesses in the corridor cope with the impacts of construction and loss of street parking.

Mississippi

Yazoo Pump

The U.S. Army Corps of Engineers wanted to build the world's largest hydraulic pump so that a handful of large farmers could increase production on lands within Mississippi's

Yazoo River floodplain. However, the project would have damaged or destroyed 200,000 acres of wetlands -- an area roughly two-thirds the size of the City of Los Angeles -- which acts as a natural buffer to storm surges and thus protects communities. The true cost of this ill-conceived proposal revealed by the NEPA review led the George W. Bush Administration to cancel the Yazoo Backwater Pumping Plant project, which would have cost taxpayers \$220 million in order to benefit a select few.

Missouri

Palestine Commons Senior Living Facility

The Department of Housing and Urban Development (HUD) proposed to construct the Palestine Commons Senior Living Facility project -- 69-units of elderly housing in a three-story structure in Kansas City, Missouri. HUD planned to build the facility on an old petroleum-tank site to contribute to Kansas City's redevelopment plan and support community revitalization. However, the NEPA process revealed potential soil and groundwater contamination on the site. Thanks to this law, the project plan was modified to include site remediation and thereby protect the facility's future residents.

Montana

U.S. Route 93

Thanks to the NEPA process, a highway project in Montana addressed safety concerns while minimizing damage to a unique cultural landscape. US-93, located north of Missoula in western Montana, saw an increase in traffic fatalities and injuries on a heavily traveled stretch heading toward Glacier National Park. To address concerns, the Montana Department of Transportation (MDT) proposed to widen a 56-mile segment from two lanes to five. This segment runs through the Flathead Indian Reservation, including territory in the heart of the Rocky Mountains -- a popular recreational destination -- and the Ninepipe Wetlands Area, which supports unique and fragile wildlife species. NEPA gave the Confederated Salish and Kootenai Tribal Government and citizen groups an opportunity to participate in the project design process. MDT looked for creative solutions and considered alternatives for the highway mitigated impacts on tribal culture, family farms, and the environment. The final design successfully addressed safety, environmental, and

cultural concerns. Slow curves in the roadway were planned along the most scenic areas to discourage speeding and follow the contour of the land. One mile of the highway was relocated around the Ninepipe Wetlands area, and wildlife crossings and fencing were added at the request of the Tribes to make the roads safer for commuters and wildlife.

Blindhorse Outstanding Natural Area

In early 2004, the Bureau of Land Management (BLM) began reviewing proposals for new drilling permits on several existing leases located on public lands in the heart of Montana's Rocky Mountain Front, spurring public outcry. During the public participation process mandated by NEPA, 99% of the more than 49,000 comments received by the BLM urged the agency to halt the drilling proposal. Those opposing the project included 45 state hunter and angler groups from around the nation who sign a resolution calling for a moratorium on oil and gas drilling on Montana's Rocky Mountain Front; a bipartisan coalition of sportsmen, ranchers, local business owners, public officials, and conservationists working to protect the front; and Senators Baucus (D-MT) and Burns (R-MT). In response to the widespread opposition, BLM stopped the environmental review process. This decision removed the immediate threat of drilling on the Rocky Mountain Front and fostered a realistic discussion of a lease buy-out and permanent protection of the Front as wilderness. Mary Sexton, a Teton County Commissioner said, "[t]he strong public support for the Front, questionable benefit of drilling, and limited natural gas resource available along the Front all lead to this sensible step to halt the permitting process. Now the door is open for people to work together...to find resolution to this contentious issue through a lease buy-out or swap that is fair to everyone."

"This decision will help protect our tradition of ranching, farming and working along the Rocky Mountain Front," said rancher Karl Rappold. "We have the opportunity to protect the Front -- both for today and for our grandchildren. It's important that we don't let this moment slip away, and we're looking to Congress for initiative, leadership and creative solutions to complete the job and protect this important part of Montana's heritage."

Nevada

Hoover Dam Bypass

The Federal Highway Administration (FHWA) developed the 3.5-mile Hoover Dam Bypass project, which would stretch from Clark County, Nevada, across the Colorado River to Mojave County, Arizona, to address increased congestion at the Hoover Dam crossing. However, the environmental impact statement for the project failed to explore an adequate variety of options. Project manager Dave Zanetell admitted as much, stating that the FHWA had "grossly underestimated some of the alternatives and too quickly dismissed them." To ensure full NEPA compliance, Zanetell's team more thoroughly researched an alternative proposed by environmental groups and added some important features to the project in response to public comments. In its final form, the bypass, which opened in October 2012, runs closer to developed areas instead of cutting through pristine corridors; it also includes accommodations such as sidewalks, pedestrian facilities, and parking to enable pedestrian access. "Oftentimes the public is a huge influence on the project. NEPA is certainly the foundation for public participation," said Zanetell. "We don't look at it as a burden; it is something we relish," he added.

Nellis Solar Power Plant

In response to increasing oil prices, the Air Force decided to construct a solar plant at Nellis Air Force Base. The plant would be the largest yet built in North America and would meet 30 percent of the base's energy needs. Under the NEPA process, the Air Force conducted an Environmental Assessment (EA). Because the facility would be partially built on a former landfill site, the EA prescribed measures to be taken during construction to prevent contamination, but the project did not present any problems and the Air Force issued a Finding of No Significant Impact (FONSI). The facility was completed in 2007 and exceeded expectations in its first year, generating 8 percent more power than anticipated and saving the Air Force an additional \$1.2 million in energy costs. In fact, the project was so successful that the Air Force is currently considering the construction of a second solar array in the area that would include renewable energy storage.

New Hampshire

Highway 93

The proposal to double -- from a total of four lanes, to a total of eight lanes -- the highway capacity of Interstate 93 between the NH/MA border and Manchester, NH raised numerous issues. Concerns related to the project ranged from water pollution, to the inducement of yet further traffic demand and traffic congestion, to the inducement of sprawl development. Thanks to NEPA, the final project addressed many of these concerns. Instead of adding two additional lanes in each direction, the project is proceeding incrementally, adding one lane in each direction to accommodate traffic demand and to reduce water pollution problems associated with chlorides. The project also included the creation of the I-93 Interagency Task Force on Travel Demand Management, which is working to identify and develop measures to reduce traffic, thereby maximizing the capacity of the project to achieve a more economically and environmentally sustainable result.

Umbagog National Wildlife Refuge Final Comprehensive Conservation Plan and EIS

Over the last decade, the economy and landownership patterns of the communities surrounding New Hampshire and Maine's Umbagog National Wildlife Refuge have changed and public access pressures have increased. For this and other reasons, the U.S. Fish and Wildlife Service (FWS) felt it was necessary to develop a master plan for the refuge, which would provide a 15-year strategic guide for conserving land, helping FWS determine how to expand the refuge and where to locate a new refuge headquarters and visitor's center. During the NEPA process for the plan, the community expressed interest in new public uses of the refuge, including dog-sledding, horseback riding, bicycling, and increased boat access, all of which FWS incorporated into the plan. FWS also expanded hunting opportunities on the refuge in response to the public's request to hunt turkeys there. The final plan balances conservation and public use, while also identifying areas for expansion. In 2012, as the refuge moves towards its acreage goal with conservation purchases and easements, refuge manager Paul Casey said, "This project is an excellent example of what can be accomplished through partnerships. By working with the forest industry, private conservation organizations, and the state, we have been able to craft a broad scale conservation effort that meets each of the partners' needs."

New Jersey

Route 52

The Route 52 causeway between Ocean City and Somers Point, first built in the 1930's, faced restricted lane and speed usage as it fell into disrepair, and the lack of shoulders posed a safety hazard to motorists. New Jersey and the Federal Highway Administration sought to rebuild the route to better serve the area. Thanks to input from area residents and other federal agencies during the NEPA process, the final environmental impact statement identified an alternative that minimized the route's environmental and socioeconomic impacts. For example, the final project avoided potentially extensive dredging and damage to wetlands as well as extensive property takings and changes in land usage. New bike paths, walking trails, and boat ramps are part of the causeway and mitigation measures were taken to account for the limited dredging and wetlands loss. Construction was finished in 2012.

New Mexico

Solar PEIS

The Solar Programmatic Environmental Impact Statement (PEIS) was prepared by the U.S. Department of Energy (DOE) and the U.S. Department of the Interior (DOI) to assess environmental impacts associated with the development and implementation of environmentally responsible solar energy development in six western states, including New Mexico. The BLM and the DOE identified a need to respond in a more efficient and effective manner to the high-interest in utility-scale solar energy development (in particular development to be sited on public lands), and to ensure consistent application of measures to avoid, minimize, or mitigate the adverse impacts of such development. The process of developing this PEIS uses the NEPA process to select areas with low natural resource values, high solar potential, and needed infrastructure that are suitable for development. By guiding projects to appropriate zones, the agencies ensure that solar projects are built faster, cheaper, and better for the environment, developers, and consumers.

Fence Lake Mine

In 1996, the Bureau of Land Management (BLM) granted an Arizona utility company a permit to mine coal on federal land near New Mexico's Zuni Salt Lake -- a shallow, briny lake sacred to the Zuni, Hopi, Acoma, Laguna, Apache, and Ramah Navajo tribes. Zuni Salt Lake is the home of the deity Salt Mother, and the area surrounding the lake is a sanctuary zone where warring tribes have met since ancient times without conflict to collect salt from the lake in reverence of Salt Mother. However, the mining permit would have allowed the utility company to pump water from underground aquifers that feed Zuni Salt Lake to use at the proposed Fence Lake Mine, thereby significantly depleting the lake's water levels. Due to the environmental and tribal impacts, environmentalists and Native American groups voiced concerns through NEPA's commenting process. In response, BLM issued a hydrological study that determined Zuni Salt Lake would not be impacted by the mine, but the Zuni leadership commissioned their own study showing that the loss of water in the lake would be significant -- about four feet of the five-foot deep lake. In the end, the utility company scrapped the Fence Lake Mine plans and decided to instead mine lower-sulfur coal from already-operating mines in Wyoming. Because of NEPA, groups were able to voice concerns that resulted in the preservation of priceless Native American cultural and religious sites, and prevented disruption to the local environment and habitat loss. Additionally, the utility saved money and minimized impacts by using an existing coal mine. In a statement before a Congressional committee, Calbert Seciwa, a member of the Zuni tribe, stated that "[w]ithout NEPA, the membership of the [Zuni Salt Lake] Coalition, affected Tribal Governments, organizations and individuals, Native and Non Native, would have been largely powerless to play any productive role in the decisionmaking process regarding this area of sacred land."

New York

Tappan Zee Bridge Replacement

The Tappan Zee Bridge Replacement project in Westchester County, New York is a good example of efficiency through NEPA. The bridge serves about 138,000 vehicles a day, and represents a vital link in the regional and national transportation network. Large and complex projects can require as many as four years or more for review, but through a coordinated effort by numerous State and Federal agencies, this project team was able to

set an aggressive schedule completing the Federal permitting and requisite NEPA review in 1.5 years, saving up to three years on the timeline of a multi-billion project expected to create an estimated 45,000 jobs.

North Carolina

Monroe Bypass

In 2012, the state of North Carolina led an environmental review of the proposed Monroe Bypass -- a four lane toll road with nine interchanges, concluding that that the area around the proposed toll road was already so developed that the new highway would have "no appreciable environmental impact." The 4th Circuit U.S. Circuit Court of Appeals disagreed, finding that the agency failed to analyze environmental impacts, conducted a flawed analysis of alternatives, and presented false and misleading information to the public. The Court found that the agencies had even ignored their own study concluding that congestion could be greatly reduced by improving the existing intersections along the U.S. 74 corridor for only \$15 million -- far below the proposed new bypass's \$700 million price tag.

South Toe River

One of the most-valued aspects of our national forests are the outstanding fishing streams they provide. So, when local anglers caught wind of a proposed project re-routing a portion of North Carolina's South Toe River, they were understandably concerned. The NEPA process gave them and other locals concerned with the proposed project's potential impacts on the river's water quality and prize trout fishing a chance to ask for alternatives. In response, the Forest Service withdrew the original proposal and is currently considering options that will preserve the sportsmens' use of the river for recreational fishing.

Interstate 26

Many local leaders, officials, and citizens questioned the size and scope of a proposed Interstate 26 highway-widening project, especially the proposed 8- to 10-lane section through the heart of West Asheville, North Carolina. It was only through NEPA's public

disclosure and review process that the community learned the Federal Highway Administration (FHWA) had wildly overstated highway accident rates in order to justify the project's first phase. On top of that, they actually found that the first phase would exacerbate -- rather than alleviate -- traffic congestion. A federal district court ultimately ruled that NEPA required the FHWA to reassess the project with accurate data and take a comprehensive new look at the overall plan. NEPA ensured sensible and informed decision making rather than a piecemeal and misinformed approach to a project that will have significant and long-term impacts on Asheville and western North Carolina.

Triangle Transit Authority Light Rail Proposal

Fast-paced growth in Wake and Durham counties' Research Triangle region has led to traffic congestion and air quality problems in the area. This, in turn, resulted in the area's designation as a nonattainment area for ground-level ozone standards. While the Triangle Transit Authority ("TTA") increased bus service, ride sharing, and vanpooling, it knew that it also needed to increase Amtrak accessibility for residents to fully address the area's air quality problems. To this end, TTA developed a light rail proposal to connect Raleigh, Durham, and Chapel Hill. TTA completely integrated its planning functions, public outreach, and NEPA compliance, creating a model of transparency and proactive decisionmaking. For example, they produced common English materials explaining NEPA's scoping process. They also met with citizens in public workshops held as open houses. These steps encouraged robust discussion and greatly boosted public participation and confidence in the results of the process.

North Dakota

U.S. Highway #2 Minot to Williston

Conducting Tribal consultations early and effectively in the NEPA process has many benefits including the protection of culturally valuable sites and avoiding litigation that can occur when these sites are overlooked. In the initial design phase of U.S. Highway #2 Minot to Williston, North Dakota Department of Transportation (NDDOT), as prescribed by NEPA, discussed the project extensively with five potentially affected Tribes, which requested that NDDOT work with a chosen representative -- Sam Little Owl -- to

determine the project's impacts on their cultural sites. NDDOT took Mr. Little Owl to each site and recorded his interpretations and discussions of the cultural importance of each. With Mr. Little Owl's permission, the recording was transcribed and non-sensitive information was later summarized for the NEPA document, helping shape the final project design.

Ohio

U.S. 33 Nelsonville Bypass

The U.S. 33 Nelsonville Bypass was the last of four segments required to connect I-77 (Ravenswood, West Virginia) to I-70 (Columbus, Ohio). Around half of the highway's 8.5 miles would bisect Wayne National Forest -- Ohio's only National Forest -- which provides over 300 miles of trails for hiking, horseback riding, off-road vehicles, and mountain biking. The NEPA process helped mitigate the impacts of project construction in many ways. For example, the final project included tree and grass planting along the sides of the highway for erosion control and native plant restoration and fencing to prevent deer from coming onto the highway. It filled 500,000 cubic yards of newly discovered abandoned underground mines near the highway to prevent car slippage. And, to top it all off, the final plan resulted in the creation of 5.1 miles of new ATV trails to make up for the temporary loss of trails from highway construction.

Oregon

Columbia River Crossing

From 2008 through 2012, the Federal Highway Administration and Federal Transit Administration developed an environmental impact statement (EIS) for a large and complex project to replace a bridge in Portland, Oregon. To build the superstructure for the new bridge, the project required installation of more than 1,000 temporary steel piles, which could injure or kill the 13 threatened and endangered fish species, including salmon and smelt, that used the river as a migratory corridor. Working closely with regulatory agencies as part of the NEPA process, the project team developed a method for reducing the impacts of underwater noise levels caused by installation of the steel piles to fish by using a "bubble curtain" (i.e., wall of air bubbles). This innovative technology reduced the

project impacts to fish so drastically that state regulators granted a 12-week extension for in-water work, which allowed construction to be completed several years earlier than it would have otherwise been. As a result, the project received both the National Association of Environmental Professionals (NAEP) Best Available Environmental Technology Award and the NEPA Excellence Award for an outstanding EIS.

Wyeth Treaty Fishing Access Site

The Wyeth Treaty Fishing Access Site project was a plan to increase access to fishing sites on the Columbia River, in Oregon, by building rock and cement groins from which people could fish. The NEPA process fostered cooperation between the Oregon Department of Agriculture and the Fish and Wildlife Service, resulting in a project that was not only less costly but also larger, therefore providing greater public benefit. The NEPA process also helped identify and minimize the project's potential negative impacts on the environment. For example, the groins were redesigned to allow fish passage, and the project footprint was reduced to minimize impacts to river-bottom habitat.

Gifford Pinchot National Forest

A massive timber sale proposed for Oregon's Gifford Pinchot National Forest, stalled by controversy over impacts on sensitive forest habitat, was entirely rethought as a result of the NEPA process. A coalition of environmentalists, the timber industry, labor representatives, and local citizens worked together to develop a plan to use timber harvesting to restore -- instead of destroy -- the forest's natural ecosystem. Instead of clearcutting, the new proposal, which the Forest Service adopted and is currently implementing, focuses on thinning dense stands of Douglas fir (the result of previous clearcutting) to re-create a more natural, diverse forest structure while still yielding 5.2 million board feet of commercial timber.

Skeleton Mountain Timber Sale

In 2012, the Bureau of Land Management (BLM) proposed a timber sale from Oregon's Butte Falls Resource Area. However, during NEPA's public comment process, locals expressed concerns about the sale's impacts -- mainly on old forest stands along the

Rogue-Umpqua Divide Wilderness and the area's watersheds, including Evans Creek. In response, BLM agreed to modify the timber sale by, among other measures, replacing logging slated for older native forests with an equal amount from younger denser stands, decommissioning excess logging roads, and avoiding new road construction on sensitive soils to protect the watershed and minimize impacts to Coho salmon. These modifications resolved many objections and the project was implemented to widespread public acclaim.

Heceta Shores Stabilization Project

The Forest Service proposed to construct a 325-foot streambank stabilization structure -- mainly out of boulders -- on the bank of Sutton Creek in the Siuslaw National Forest to prevent erosion. However, comments submitted through the NEPA process revealed that hardened structures built to prevent erosion often did the opposite by preventing the beach from replenishing itself. Comments also revealed that such structures often interfered with the public's access to and use of the beaches and river banks on which they are constructed -- for example, by shortening the length of the beach. After listening to the public's information and concerns, the Forest Service expanded its environmental review and redesigned the project. Most importantly, they replaced the hard engineered boulders originally proposed to prevent erosion with "soft" erosion protection structures like sand bags and logs, thereby maintaining the beach's ability to regrow, better protecting the stream's water quality, providing more public access to the area, and minimizing the project's visual impact.

Modoc Restoration Project

Fremont Winema National Forest's Yamsay Mountain is a culturally important feature of eastern Oregon. Not only is the snow-covered mountain majestic, but it is also central to the mythology of the Klamath people. So folks were concerned when the Forest Service's Modoc Restoration Project proposed an aggressive treatment of white fir, which would have resulted in virtual clearcuts on Yamsay Mountain. Fortunately, through the NEPA process, conservationists were able to convince the Forest Service to modify the heavy-handed treatments to culture individual legacy trees and thin the white fir on about 252 acres of the project.

Pennsylvania

PA Turnpike/ I-95 Interchange Project

The NEPA process for the PA Turnpike/I-95 Interchange Project, which will close the "gap" in I-95, minimized local and environmental impacts with local and governmental support. Issues of potential impact to historical sites, demands of the construction process, and water or other environmental features led to the development of a thorough monitoring and mitigation plan implemented in the planning and construction of the interchange. There was significant public involvement in the planning process, and testimony and comments received at the Public Hearing, written comments received on the Draft EIS during the comment period, and written comments received on the Final EIS were part of shaping the project. Public participation helped choose an alternative with the lowest environmental impact, the lowest number of business and residential displacements, and the most support from public officials and the general public.

Puerto Rico

El Yunque Rainforest Preserve

At under 30,000 acres, El Yunque (also known as the "Caribbean National Forest") is our country's smallest national forest, as well as the only tropical rainforest in the national forest system. For Puertoricaños, El Yunque is a cultural jewel, largely because of the unique rock engravings made by their ancestors -- the Taino people. So, the community was understandably upset when the Federal Highway Administration (FHWA) proposed to slice the preserve in half to rebuild a road long-closed due to massive landslides. Ignoring endangered species, increased slide risks, drinking water impacts, and requests from federal and local agencies, FHWA decided not to conduct an environmental impact statement (EIS). When a court found that this violated NEPA, FHWA dropped the project rather than study and disclose all of its impacts. Today, the rainforest is intact and the drive around it to the new Forest Service recreation area on its far side takes a mere 25 minutes on existing roads.

Rhode Island

Route 403

In order to alleviate congestion, the Rhode Island Department of Transportation (RIDOT)

proposed relocating Route 403 -- a two-lane road through residential North Kingstown -- and building a new four-lane highway. In accordance with NEPA, RIDOT considered alternatives to its original plan, involving the public early in the design process. The NEPA process resulted in modifications to the original plan suggested by local citizens that the RIDOT would not have otherwise thought of, including a reduction in acreage that lessened damage to wetlands. "The people that live [in the affected area] know more than I do," said Peter Healey, Principal Civil Engineer for RIDOT. He explained that a key benefit of public involvement was giving a voice to those who will be regular users of a project. "NEPA played a vital role in balancing [...] views," Healey said. The idea behind NEPA is to, "make a concept available to the public. [...] You can't make all parties happy, but you can certainly balance their interests....The public wants to help you make a project better."

Providence Community Health Center

Rhode Island's Providence Community Health Center needed additional space for service delivery and ancillary programs at its facility in South Providence, an economically depressed area of the state. The health center chose the abandoned Federated Lithographers complex for this project due to its proximity to the center's existing facilities. In considering this important brownfield redevelopment project, the NEPA process helped the Department of Health and Human Services (HHS) uncover the existence of potential residual contaminants from lithography chemicals and underground tanks left by the site's former inhabitants. As a result of this finding, HHS worked with the Environmental Protection Agency and the Rhode Island Department of Environmental Quality to ensure that the plan for the site included measures necessary to protect the health of construction workers and, eventually, the health center's staff and patients. In the end, the project was constructed in a way that not only protected its occupants from dangerous chemicals, but also contributed to the development of one of the most economically distressed neighborhoods in Providence.

South Carolina

Savannah River Site

Built during the 1950's, to refine nuclear materials for deployment in nuclear weapons, the Department of Energy's (DOE) Savannah River Site covers 340 square miles of land in South Carolina. Past disposal practices of contaminants such as radioactive waste, arsenic, lead, mercury, and plutonium, have caused significant site contamination, leading DOE and the South Carolina Department of Health and Environmental Control to consider the site the greatest human health risk in South Carolina. Thanks to NEPA's scoping process, DOE has taken a comprehensive approach to the cleanup process that has employed groundbreaking technologies to increase the effectiveness of cleanup efforts and reduce risk. The Environmental Assessment analyzed the waste streams of both low-level and mixed low level radioactive wastes for the past, current, and anticipated scope of work, and all potential government and commercial waste facility destinations. This resulted in solutions that were much more cost and time efficient, and limited the expected transportation impacts over the long term in the surrounding communities. For example, DOE has immobilized contamination with impermeable clay caps to save money while minimizing potential impacts on worker health and safety and reseeded damaged portions of some areas of the site with native vegetation. While cleanup of the site still has a long way to go before it is no longer considered a threat to human health, NEPA has helped ensure the federal government uses the most effective methods available.

South Dakota

PrairieWinds Project

The PrairieWinds Project is the largest wind project owned solely by a cooperative. Basin Electric proposed the wind farm as part of its initiative to supply 10% of its generating capacity from renewable sources. The project includes 108 turbines that supply 162 megawatts of electricity. Through the NEPA analysis, the U.S. Department of Agriculture and Department of Energy minimized both environmental impacts, such as wetland degradation and potential avian hazards, and local disturbances, such as noise. Further, they structured the project so that the turbines are located on leased farmland, 98% of which is still being used for farming. And that's not the only economic benefit this project has contributed to the area! Indeed, the wind farm will provide \$3.1 million to the Tri-Central Schools Fund and \$400,000 in tax revenue to support the cumulative capital

development fund and local fire fund. Construction was completed in 2012 and it currently operational; Basin Electric now draws 12% of its energy capacity from renewable sources.

Tennessee

Oak Ridge National Laboratory Cleanup

To accelerate the cleanup work at the Oak Ridge National Laboratory, the Department of Energy (DOE) submitted plans to build the Transuranic Waste Processing Center (TWPC). While drafting the project's environmental impact statement (EIS) required by NEPA, DOE discovered that it would need to further treat the radioactive waste processed by the TWPC to reduce the risk of human and environmental exposure to radioactive waste and ensure that all parts of the processing facility are placed outside the 500 year floodplain. The EIS also suggested a number of best management practices to ensure that the project would not adversely impact nearby fragile wetlands. Along with protecting the wetlands, the NEPA process made the public aware of the alternatives that DOE was considering, and resulted in \$500 million saved.

Texas

Bolivar Beneficial Use Marsh

Historically, deep-draft channel dredged materials had been dumped into unconfined placement areas in Galveston Bay, adversely affecting fish habitat. While going through the NEPA process to create a 200-acre Bolivar Beneficial Use Marsh in the bay, the Army Corps of Engineers worked with other agencies to form the Beneficial Use Group. The group devised a plan that addressed the problems that result from dumping dredged material into the bay while brainstorming creative ways to enhance the existing bay ecosystem. Having identified the loss of intertidal marsh as a critical problem in the Galveston Bay estuary, the Beneficial Use Group decided to use dredged materials to create intertidal marsh and nesting islands for colonial water birds, resulting in a better, smarter, more functional project for the Corps, the community, and the environment.

Utah

Timpanogos Cave National Monument Visitor Center

Since the visitor center at Utah's Timpanogos Cave National Monument burned down in 1991, staff have been working out of a double-wide trailer. Not only was the visitor center inadequate in terms of space, but it was also located in a dangerous rock-fall zone. For this reason, the National Park Service proposed to build a new facility. The NEPA analysis included comments from experts who estimated the average size, frequency, and velocity of rock falls in the area. Their input revealed that the hazards from rock falls was much greater than originally thought and allowed the Park Service to identify where such falls were most likely. As a result, the National Park Service was able to site the visitor center in an area that will maximize visitor and staff safety.

Virginia

Route 50 Traffic Improvements

The segment of Route 50 passing through the Virginia towns of Aldie, Middleburg, and Upperville in the foothills of the Blue Ridge Mountains is a classic example of a traditional small-town main street. It was never a major truck or commuter route. However, it began to suffer from problems of speeding, aggressive driving, and congestion during rush hours at one particular intersection. Virginia's Department of Transportation (VDOT) came up with a conventional solution: expand the road into a four-lane divided highway with bypasses around the small towns. The citizens, however, had a different vision. They seized the opportunity for public involvement afforded by the NEPA process and ran with it, creating a coalition to seek alternatives to the plan. The coalition found that a four-lane highway would only increase speeding and local businesses would suffer if bypasses redirected traffic around the towns. So they came up with an alternative plan that would solve the roadway's problems, promote local businesses, protect the area's rural and historic character, and cost much less than conventional highway expansion. Instead of a wider road that bypassed the town, the solution included entranceway features at the edges of the towns, planted medians, raised intersections, changes in pavement for parking areas, and guardrails made from natural materials. In addition to their aesthetic advantages, these additions will reduce speeding and promote pedestrian safety. VDOT approved this design in 2003 and is now implementing it through a partnership with the local communities and local government. In the end, NEPA delivered an innovative, less

expensive solution that can be, as coalition member Susan Von Wagoner said, "a model for the nation."

Onley Community Health Center

The Department of Agriculture granted money to Eastern Shore Rural Health Systems to build the Onley Community Health Center in Onley, Virginia, as part of its Rural Community Facilities Program. However, the proposed construction, which included a new medical building, parking, and infrastructure, was located within an aquifer that supplies more than 50 percent of the surrounding community's water needs. As a result of the NEPA process, the Environmental Protection Agency reviewed the project proposal and suggested modifications to address potential groundwater contamination, and these changes were incorporated into the project. For example, the local Soil and Water Conservation District planted native vegetation on facility grounds to create a healing garden for patients and their families that acts as a natural filter for runoff from the facility, thereby reducing the risk of groundwater contamination.

Washington

Huckleberry Land Exchange

Under the proposed Huckleberry Land Exchange, the U.S. Forest Service would trade nearly 7,000 acres of mature and old-growth forest in Washington's Mt. Baker-Snoqualmie National Forest, including a portion of the Muckleshoot Tribe's historic Huckleberry Divide Trail, for about 30,000 acres of high-elevation land held by Weyerhaeuser Timber Company. Citizen groups and the Muckleshoot Indian Tribe challenged this proposal. The court found that the Forest Service violated NEPA by failing to consider an adequate range of alternatives and by neglecting to analyze the cumulative impacts of the proposed exchange. As a result, the Forest Service improved their analysis and altered their plans for carrying out the exchange. Ultimately, the Huckleberry Land Exchange went forward with a better design that protected old-growth forest and culturally and recreationally important public lands.

West Virginia

Mingo-Logan Coal Spruce No. 1

The environmental impact statement (EIS) developed under NEPA for Mingo-Logan Coal's Spruce No. 1 mine exposed the project's devastating impacts on the surrounding community. Indeed, after extensive scientific study, a major public hearing in West Virginia, and more than 50,000 public comments, it became clear that the environmental repercussions of disposing mining waste into surrounding streams would be so great that alternatives must be explored.

Wisconsin

Highway 26 Bypass

Highway 26 is a regional road that runs through southcentral Wisconsin, connecting Illinois to Wisconsin's Fox River Valley. To address increasing traffic from trucks and regional drivers on the road, Wisconsin's Department of Transportation (WisDOT) proposed the construction of a bypass. NEPA provided the opportunity for stakeholders to engage in discussions about the project development. "NEPA forces us into providing alternatives that are representative of the interests from all agencies involved," said James Oeth, WisDOT project manager. As stipulated by NEPA, several alternatives were selected, studied in detail, and made available for public comment. "Without NEPA, we would have just asked what the shortest distance was and built the road through there," said Oeth.

The final decision created a route with the least impact and disruption to the community. For example, while the original route would have plowed through Ed McFarland's dairy farm, which sits west of Watertown, the final plan navigated around it. "Public involvement helped us...the less land we lose, the better," said McFarland. Additionally, under the final plan, the bypass skirted the community's urban service area, instead of destroying pristine land. While not all of the community's major requests were accommodated, residents appreciated the opportunity to be involved in the process. "I believe NEPA allowed for these alterations to take place," said Andy Didion, a Jefferson resident. "The DOT is getting much better and realizing this affects people's lives." "We talked out problems and came up with solutions that were agreeable to most participants," stated Greg David, a

Jefferson County Supervisor. "The NEPA process has saved us a lot of money, and mitigated many of the externalized consequences of a freeway expansion project."

Wyoming

Clark River Seismic Survey

In 2004, Windsor Wyoming Inc. proposed a seismic survey on land owned by the Bureau of Land Management (BLM), the Forest Service, and private landowners. The environmental analysis called for the drilling of 3,420 seismic shot holes in a 47-mile area surrounding Wyoming's Clark River -- the state's only designated Wild and Scenic River. Under the proposal, explosive charges would be fired into the holes to create a 3-D picture of the area's available resources. After reviewing the draft plan, nearby private property owners represented by Powder River Basin Resources Council -- a bipartisan community group -- noted that it failed to consider how these explosions would affect scarce water resources, elk and other game species, hunting opportunities, Native American historical sites, and private property values. This public input led BLM to re-examine the draft plan and consider the use of a new survey technology called "passive seismic" that would mitigate the damaging effects of the explosive charges. In the end, thanks to NEPA, private property owners, land managers, and industry achieved a seismic exploration plan that protected game species, Tribal sites, private property rights, and critical water resources.

Bridger-Teton National Forest Off-Highway Vehicle Route Designation Project

In January 2009, the Forest Service developed a plan to better balance conflicting uses of Wyoming's Bridger-Teton National Forest. The plan designated roads and trails for Off-Highway Vehicles (OHVs) to reduce conflicts between the area's multiple users, reduce resource impacts, and improve route maintenance while allowing for effective enforcement. After conducting an environmental analysis for the project and listening to public comments, as required under NEPA, District Rangers decided to implement a modified plan that addressed concerns from local business owners, citizens, and environmental organizations. The final plan better defined the trail system as a whole, benefitting the environment and individuals using the park for non-OHV activities, as well

as OHV enthusiasts. As Bob Hatton, owner of Bob's Quads -- a local ATV service and repair shop—stated, "I can't really see a downside to it. The last thing I want to see is off-highway vehicles running all over the place. I want to be able to go up the Gros Ventre and hike and enjoy the wilderness as well as motorized travel...not to mention the wildlife. Just having an organized trails system with this much research, it's hard to find fault with that." The OHV trails were sited to avoid ecologically-important areas like Wilderness Study Areas, roadless areas, and critical wildlife habitat. Thanks to open communication with the public and the Forest Service's willingness to look at impacted resources and the sustainability of the system as a whole, the project struck a remarkable balance between the area's multiple attributes and users.

Bighorn National Forest Babione Vegetation Management Project

The Forest Service's Babione Vegetation Management Project in Bighorn National Forest, Wyoming, was designed to reduce hazardous fuels -- accumulated dry brush and dead trees that increase the likelihood of large wildland fires -- and restore forest health through various means such as cutting and prescribed burns. However, private landowners adjacent to the project were concerned that increased access to the area necessary to perform these activities would lead to trespassers on their land. Thanks to NEPA, the landowners were able to express their concerns to the Forest Service and, in response, the agency incorporated several design elements into the project to address this issue, such as the erection of gates at key access points.