

## **Integrating Wildlife Action Plans with Transportation Planning and Projects: A First Look**

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### **Introduction And Methodology**

Many state wildlife action plans provide detailed blueprints for addressing prioritized threats to species of concern and their habitats. Several plans rank the direct and indirect impacts of surface transportation projects among the most significant threats at statewide or regional scales and demonstrate geospatial capabilities to identify specific transportation projects of potential concern. However, even these plans do not include meaningful strategies for participating in transportation planning processes to assure favorable outcomes for wildlife and to access federal transportation funding for plan implementation. Passage of new federal transportation legislation and federal administrative changes created significant opportunities for spending federal transportation funds to enhance wildlife conservation and to implement relevant portions of wildlife action plans while achieving worthwhile transportation goals.

This paper provides a preliminary report on an ongoing project to identify immediate opportunities for pilot projects to implement relevant portions of state wildlife action plans through federal-state transportation planning and projects using transportation funding. First, we evaluated authorized federal transportation funding allocations to states over the period 2005-2009 for the potential to be used to implement state wildlife action plans and produce favorable outcomes for wildlife conservation. We analyzed factors such as: (1) total level of federal transportation funding by state; (2) increases in federal funding per state over historical trends; (3) historical state transportation expenditures on programs benefiting wildlife; and, (4) amount of project-specific funding (“earmarks”) designated by

Congress for projects likely to involve significant wildlife impacts. Based on this analysis, we selected fifteen state wildlife action plans for review.

Second, we evaluated these fifteen state action plans to determine: (1) whether or not they ranked highly direct and indirect threats posed by surface transportation activities; (2) whether or not they demonstrated geospatial capabilities for identifying specific transportation projects of potential concern; (3) the degree to which leaders of the state's wildlife agency and of its transportation agency may be open to incorporating its wildlife action plan into transportation planning and projects; and (4) the existence of a competent and committed constituency for wildlife conservation with knowledge of and support for the state's wildlife action plan.

Third, we analyzed current, federal transportation funding programs to identify those programs most likely to be available for expenditure on wildlife-related outcomes. Federal transportation funding is not allocated to states in a lump sum. Rather, it is allocated to states through several distinct programs, with specific amounts of federal funding allocated for distribution to states through each program. We identified eight distinct federal transportation funding programs that could potentially help fund implementation of relevant portions of a state wildlife action plan.

Finally, we evaluated the allocation of funds from each of these programs for use in the fifteen selected states to identify ten transportation initiatives – representative of this array of funding programs – that could serve as pilot projects. Each project may present a significant opportunity for a state wildlife agency and its constituents to work with state and federal transportation agencies in the relevant planning process to implement components of the wildlife action plan (while also achieving appropriate transportation goals) with transportation funding. These projects are currently being evaluated intensively to determine their appropriateness as pilot projects.

### **Benefits To Federal And State Transportation Agencies Of Using Wildlife Action Plans**

Transportation practice is gradually migrating to a context-based approach to both program and project planning (see [www.contextsensitivesolutions.org](http://www.contextsensitivesolutions.org)). Increased sensitivity to wildlife and natural

resource protection is a natural result of this trend. However, mission-critical goals such as improved network efficiency and safety also support greater attention to wildlife protection. These goals include:

**Expediting Planning and Project Completion:** As tools and techniques for integrating wildlife and natural resource outcomes become available, agencies that incorporate these outcomes into their project development process achieve accelerated approvals as promoting environmental stewardship. Early consideration of wildlife outcomes adds little (about 1%) to project costs, a trivial figure when compared to the cost of delay and the benefits of acceleration with highway construction costs increasing by 27% from 2001-20005 (see [www.fhwa.dot.gov/pricetrends.htm](http://www.fhwa.dot.gov/pricetrends.htm)).

**Safety Considerations:** Transportation cost-benefit analysis focuses on private benefits (reduced delay, more reliable freight delivery, improved safety) to allocate scarce public transportation dollars. The cost of wildlife-vehicle collisions in terms of human injuries and fatalities, vehicle damage, and wildlife-related costs (carcass removal and disposal, etc.) is rapidly growing as the actual costs are more accurately documented, including run-off-the-road accidents by drivers veering to avoid collisions. In more rural states, wildlife/vehicle collisions account for more than 50% of all reported accidents. As these costs become better known the safety benefits of making the road network more permeable to wildlife through construction of overpasses and underpasses, and better planning to avoid habitat/road conflicts in the first place, become more obvious.

### **Federal Legislation And Administrative Actions Have Created Significant New Opportunities For Using Wildlife Action Plans To Influence Transportation Planning And Projects**

Completion by all states of wildlife action plans and approval by the U.S. Fish & Wildlife Service has shifted attention to implementation. In addition to directing traditional funding streams for fish and wildlife conservation, wildlife action plans have the potential to significantly influence planning and projects by federal and state transportation agencies. Enactment in 2005 of the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users” (“SAFETEA-LU”) and a variety of federal administrative actions have created new and significant opportunities. SAFETEA-LU included significant new requirements that federally-funded surface transportation planning reflect considerations

such as wildlife conservation needs identified in state wildlife action plans. These planning requirements could influence the spending of significant amounts of federal money. Federal authorizations under SAFETEA-LU amount to \$284.6 billion over five years (FY2005-FY2009). Since federal transportation grants must be matched by state or local project sponsors at a rate of between 20%-50% of total project costs, these grants leverage an even higher amount of transportation spending.

Federal funds are disbursed to states through a variety of programs, each of which has distinctive requirements and attributes. These funding programs include the Interstate Maintenance Program, the National Highway System (corridors of national significance), the bridge program, and the Surface Transportation Program (general support for roads of state significance). The federal law also carves out certain expenditures for distribution to states to achieve specific outcomes such as highway safety, congestion relief, air quality improvement, and community enhancement. Funds provided under each of these programs are eligible, under certain circumstances, for expenditure on projects that benefit wildlife. However, such expenditures are not mandated; wildlife agencies and constituent groups must work closely with state transportation agencies to identify opportunities for achieving mutual objectives.

Recent administrative actions by federal and state governments also encourage better integration of wildlife conservation and environmental considerations into surface transportation planning and projects and provide new tools to achieve this objective. Federal administrative actions and programs include: (1) "context-sensitive solutions," which seeks to calibrate project planning and design to the surrounding community and natural context; (2) "exemplary ecosystems," which recognizes projects and programs that support healthy ecosystems as a defined project outcome; (3) "Eco-Logical," a new tool to assist transportation planners in adopting an ecosystem-based approach to project planning and development; (4) "green highways," an inter-agency initiative in the Mid-Atlantic region to promote watershed protection, stormwater management and recycling in transportation project development and system management; (5) "transportation enhancements," which is a separately-funded program to achieve community and environmental goals, including efforts to "reduce vehicle-caused wildlife mortality while

maintaining habitat connectivity;” and, (6) new requirements that state transportation agencies incorporate conservation maps and plans, as well as natural and historic resource inventories, into transportation plans.

### **Federal Transportation Funding Available For Achieving Wildlife Conservation Priorities**

While wildlife mitigation is an eligible project costs in almost all federal-aid transportation program categories, we identified several initiatives where intervention by wildlife agencies to affect transportation planning can be of greatest benefit. These include:

**1. Reconstruction of Interstate System:** The 44,800-mile Interstate System, the backbone of our National Highway System (NHS) network, reached its 50-year anniversary in 2006. Long segments of the system, built before enactment in 1970 of the National Environmental Policy Act (“NEPA”), are now reaching their design life and require significant reconstruction. At the same time other elements of the NHS are being brought up to Interstate System standards, and new “High Priority Corridors” are periodically added to the System by Congress. Near-term opportunities for achieving wildlife conservation outcomes and implementing relevant portions of state wildlife action plans in planning for reconstruction and construction include I-90 in Washington; I-95 in New Jersey, Maryland, Virginia, North Carolina, and Florida; I-69 from Texas to Michigan; I-94 across Michigan and I-73/I-74 in North Carolina, Virginia and West Virginia.

**2. Transportation Enhancement Program (“TE”):** Created in 1991, this program sets aside 10% of all funding under the Surface Transportation Program (STP) for twelve specific categories of non-highway, community-improvement programs, including improved wildlife habitat connectivity. However, in the fifteen years of its existence, only \$70 million (1%) of more than \$7 billion in TE expenditures has been spent on environmental mitigation and much less for specific wildlife conservation activities. Since the STP is funded at more than \$6 billion annually under SAFETEA-LU, more that \$600 million is available annually for TE programs, including wildlife conservation. Aggressive marketing of wildlife action plans to state DOTs could free up much more TE money in support of these plans. Arizona, in

particular, has mapped out wildlife-highway “choke points” throughout the state and is in a good position to take advantage of this opportunity.

**3. Mitigation Banking Programs:** All state DOTs are obligated under various federal statutes (NEPA, Clean Water Act, Endangered Species Act, etc.) to minimize the adverse environmental impacts of their projects and to mitigate damage that cannot be avoided. Mitigation costs are paid out of transportation project budgets. Rather than mitigate on a project-by-project basis, DOTs in Minnesota and North Carolina have entered into inter-agency agreements with their natural resource agencies, soil conservation agencies, U.S. Corps of Engineers etc. to restore habitats on an ecosystem-wide basis. North Carolina has restored between 30,000-40,000 acres of wetlands and coastal habitat under this program, while Minnesota is focusing on restoring its prairie pothole region. Minnesota has also committed to mitigating habitat losses caused by local road construction activities, even though such local road programs are not covered by federal law. DOT dollars are the major source of funding for these restoration efforts.

**4. Federal Land Highway Program (“FLHP”):** Federal Land Management Agencies (USFS, NPS, USFWS and BLM) have separate authorizations or, in the case of USFWS, separate appropriations, for road funding. These funds are used to build and maintain roads within these federal lands. However, they can also be used to pay the non-federal share (usually about 20%) of project costs for projects that weave through or are outside federal land boundaries if they provide access to these areas. Thus, federal NHS or STP funds could be matched with FLHP funds to build projects that protect or enhance these areas with 100% federal funding. A potential significant use of this approach could be funding improvements to SR 41 in Florida (the Tamiami Trail) – an at-grade road that impedes water flow from Lake Okeechobee south to the Everglades – to create an elevated structure (the “Tamiami Skyway”) to restore historic sheet flows.

**5. Project funding generally:** While mitigation banking can provide off-site mitigation for project-related habitat impacts, wildlife benefits most if habitat damage is avoided in the first instance during project development and construction. Increasingly, state DOTs are avoiding habitat damage by

adopting “context-sensitive” approaches to project planning and design. For example Maryland DOT, in partnership with the U.S. Environmental Protection Agency, is testing a “green infrastructure” approach to the reconstruction and upgrading of Route 301. It includes an early ecosystem assessment process that goes far beyond traditional project study boundaries to assess and mitigate damage to affected watersheds. Similarly, Florida, California, New Jersey, Arizona, and Montana are focusing on making projects more permeable for both wildlife and stream flows by designing and constructing overpasses (for wildlife) and underpasses (for both wildlife and waterfowl). Planning, design and construction of these project-related habitat features are paid for out of general federal transportation assistance under the relevant federal program (NHS, STP, bridge etc.).

**6. Highway Safety Improvement Program (“HSIP”):** Section 1401(a)(3)(B) of SAFETEA-LU added language to the federal Highway Safety Improvement Program making the “addition or retrofitting of structures or other measures to eliminate or reduce accidents involving vehicles and wildlife” eligible for federal transportation assistance. Since such expenditures are newly eligible under this program, it is not clear if, and to what extent, state DOTs are programming safety money for these purposes. However, states are required to develop strategic highway safety plans as a condition of receiving this assistance. This provides an opportunity for wildlife agencies and advocates to work with state DOT safety officials to study the magnitude of the safety problem resulting from wildlife-vehicle crashes (or run-off-the-road crashes related to wildlife avoidance) and to allocate HSIP funds to reduce wildlife-vehicle conflicts.

**7. High Priority Projects (“HPP”):** High Priority Projects, also known as “earmarks,” are projects specifically funded by Congress as a set-aside from formula-grants to states. These projects do not have to compete for funding – the funding is guaranteed. Earmarks can be for any element of project development (planning, design, construction etc.) and multiple earmarks can fund different elements of the same project (roads, bridges, mitigation, etc.). SAFETEA-LU included more than 6,200 earmarks totaling more than \$24 billion. California and Alaska each received more than \$1 billion in earmarks. (A listing of all earmarks by state can be found at [www.taxpayer.net/Transportation/safetealu/states.htm](http://www.taxpayer.net/Transportation/safetealu/states.htm).) Given the amount of earmark spending in SAFETEA-LU (almost 5% of total authorized expenditures),

HPPs should be regarded as a separate program with guaranteed, project-specific funding. Since the projects are specifically identified, wildlife agencies and advocates can work with state DOTs to identify potential conflicts between earmarked projects and wildlife action plans and to resolve these conflicts favorably to wildlife conservation through use of earmarked federal funds for wildlife mitigation.

**8. Private-public partnerships:** In addition to federal grant funding, SAFETEA-LU provided states with a valuable asset to finance transportation projects – the built highway system itself. The existing highway system was financed on a pay-as-you-go basis: highways and bridges were built with funds raised from federal and state gas taxes. Until recently, tolls were prohibited from being collected on the federal-aid system. Consequently, the public owns the system largely debt-free. However, federal and state gas tax revenues have not kept pace with system needs and Congress has gradually allowed states to: (1) borrow money from private equity markets to build projects now and pay for them with future gas tax revenues; (2) collect tolls on the existing federal-aid system, including the Interstate System; (3) build new NHS highways using toll-financing; and, (4) enter into long-term leases of segments of the federal-aid system to private equity partners who typically make a negotiated payment (up front or over time) for the right to collect and retain toll revenues over the period of the lease. Private payments are then (usually) reinvested in the transportation system to meet immediate funding needs. These “public private partnerships” (“PPPs”) are actively encouraged by the federal government both on and off the federal aid system (see [www.fhwa.dot.gov/ppp.htm](http://www.fhwa.dot.gov/ppp.htm)). Although a new feature of federally-financed surface transportation, PPPs are likely to become a major source of future funding for both system reconstruction and new project financing.

State wildlife agencies and advocates should move quickly and aggressively to work with state DOTs to integrate wildlife action plan objectives into state PPP initiatives. State wildlife agencies and advocates should work with state DOTs to include wildlife protection provisions in all leases of highway assets, including requirements that private partners increase corridor permeability for wildlife in the course of reconstruction of the leased asset. A portion of revenues realized from such leases should also be used to mitigate for past wildlife damage. If an asset is retained in public ownership but tolled, a

portion of the toll revenues should be set aside for wildlife mitigation. Finally, if new tolled highways are being built, toll revenues should be used to incorporate wildlife mitigation features in highway design and construction and to acquire and protect wildlife habitat adjacent to, or off-site, as part of a mitigation banking program.

### **Potential Pilot Projects For Using Transportation Program Funding To Implement State Wildlife Action Plans**

We reviewed these eight transportation funding programs as applied to ten targeted states to identify potential opportunities for using SAFETEA-LU funds – or private funds made available under SAFETEA-LU tolling provisions – to achieve wildlife conservation goals and implement relevant provisions of state wildlife action plans. Our goal was to identify a potential pilot project in each targeted state that presented a significant opportunity to use one or more of these eight funding streams for wildlife benefits. We also identified a set of potential pilot projects that, together, represented opportunities to explore a diverse array of federal funding programs. Specific opportunities for pilot projects include the following.

**Arizona:** The Arizona Department of Fish and Game has developed a “Vision for Protecting and Restoring Wildlife Connectivity” and has identified 152 “linkage zones” where transportation infrastructure (highways, canals, rails) intersects wildlife habitat. It has also identified and mapped the most promising linkage sites along these corridors. This detailed research program (which won a Federal Highway Administration 2007 Environmental Excellence Award) provides an excellent basis for working with state and local transportation agencies to design wildlife crossings (overpasses and underpasses) into corridor reconstruction projects. In particular, U.S. Route 60 between Superior and Miami has been identified as a prime corridor for restoring wildlife connectivity. Arizona ranks third among all states in percentage increase in overall transportation funding (40.7%) under SAFETEA-LU and U.S. 60 is part of the National Highway System (NHS). Since Arizona DOT is in the process of upgrading U.S. 60 in Pinal County, there is an immediate opportunity to incorporate wildlife protection elements into project design under the NHS or Surface Transportation Programs

**California:** The California wildlife action plan identifies the South Coast region from South Los Angeles County to the Mexican border as “the most-threatened biologically diverse area in the continental U.S.” (see [www.dfg.ca.gov/habitats/wdp/region-coast\\_south/overview.html](http://www.dfg.ca.gov/habitats/wdp/region-coast_south/overview.html)). Among other things, this plan calls for protection of “priority wildlands linkages” identified in the “South Coast Missing Linkages Project.” California was the first state to authorize public-private partnerships (PPPs) to attract private capital to new highway construction. There are several PPP projects underway in the South Coast region, with the most ambitious and the most habitat intensive being SR 125 through the Otay Mesa, an outer ring-road around San Diego to the border. The project has already committed \$20 million to wildlife protection programs, including the purchase of 1,000 acres of habitat as permanent open space. This project is well into construction but significant opportunities still exist to leverage this commitment to develop and implement a comprehensive wildlife protection plan for the area.

**Colorado:** Transportation and infrastructure are identified in Colorado’s wildlife action plan as one of “Key Issues Affecting the Future of Wildlife in Colorado for All Taxonomic Groupings” (*CO CSWS*, Table 13, at 46). Colorado’s plan identifies the conservation actions required for “[m]aintaining and reestablishing habitat and landscape connectivity” to include “[r]emoving or modifying barriers, protecting corridors (and approaches), riparian areas, using wildlife-friendly roadway crossings, improving planning for wildlife needs in transportation projects, etc. (*CO CSWS*, Table 15, at 57). Colorado received the highest percentage increase in total federal funding under SAFETEA-LU (46.7%). I-70 from the top of Vail Pass to East Vail has experienced significant wildlife-vehicle crashes and high mortality rates for moose, elk and lynx. Parts of the road are scheduled for reconstruction, with Interstate Reconstruction and Maintenance funds available to fund wildlife crossings. Also, the danger to both humans and wildlife is sufficiently significant to consider use of Highway Safety Improvement Program funds for this corridor. Two new High Priority Corridor highways are in advanced planning through the eastern prairie region: the Heartland Expressway from Denver to Rapid City, South Dakota, and the Ports-to-Plains Expressway from Laredo, Texas, to Denver. With a former director of Colorado’s natural

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resource agency leading the state DOT, prospects appear good for establishing a productive collaboration between these agencies to address wildlife conflicts.

**Florida:** According to Florida's wildlife action plan, the highest ranking endangered ecosystem in the United States is the south Florida landscape (*FL CSWS* at 30). "Roads, Bridges and Causeways" were identified in Florida's plan as one of the most important "multiple habitat threats" (*FL CSWS* at 459). Florida has won two Federal Highway Administration "Exemplary Ecosystem" awards for its GIS-based tool for integrating transportation, wetland, and wildlife planning. At \$1.7 billion in average annual apportionments, Florida ranks third in total federal assistance under SAFETEA-LU. Florida is considering over 1,000 miles of new, tolled highways to support a projected eight million more residents in the next 25 years. One particular problem is S.R. 41, the "Tamiami Trail," an at-grade road across southern Florida that impedes sheet water flow from Lake Okeechobee south to the Everglades. Wildlife advocates have proposed reconstructing an 11-mile stretch of S.R. 41, as an elevated "Skyway" that would dramatically improve water flow and wildlife permeability along the corridor. Funding for the estimated \$300 million required may be available from three federal programs: the federal Surface Transportation Program (STP), Corps of Engineer funding under the Everglades Restoration program, and National Park Road (NPR) funding. Since NPR funds can be used as the local match for STP funds for roads through or near national parks, the Skyway could be built with 100% federal funds.

**Maryland:** Maryland spends the highest percentage of any state of its Transportation Enhancement funds on environmental mitigation, especially habitat restoration (14%). It is also cooperating with U.S. EPA to a new ecosystem-based, "green highway" assessment process in the reconstruction of U.S. 301 through the Chesapeake Bay watershed. Maryland also leads the nation in promoting a "context sensitive" approach to project planning, design and construction. By combining US EPA "green highway" assistance with state and federal funding under the STP and Transportation Enhancement Programs, Maryland DOT could collaborate with Maryland DNR to integrate the goals of the state wildlife action plan into design and development of the U.S. 301 project.

**Minnesota:** Minnesota requires all roads that destroy wetlands to provide mitigation, even non-state (local) roads that are not part of the state road system. Minnesota DOT (“MinnDOT”) will receive an FHWA 2007 Environmental Excellence award for its comprehensive approach to wetland mitigation. The state has identified a series of drained wetlands in the prairie pothole region of the state, especially around and in the Wingard Wildlife Habitat Area in the Red River Valley, as the focus of mitigation efforts. MinnDOT teams up with the state Bureau of Water and Soil Restoration (BWSR) to do the actual restoration work, and with the Minnesota DNR to manage the restored habitat. In this manner MinnDOT mitigation funding leverages restoration and management services from sister state agencies. Funding comes from federal funds on federally-assisted projects and state gas tax revenues for state and local projects. Minnesota’s commitment to provide mitigation funding for virtually all highway projects provides a unique opportunity for wildlife advocates to guide this mitigation funding program to more directly support remediation efforts recommended under the wildlife action plan.

**New Jersey:** New Jersey, a highly built-out state with one of the lowest state gas tax in the nation (10 cents per gallon), has limited transportation resources. Expenditures for wildlife must therefore closely support core state transportation goals. New Jersey DOT has responded to its funding challenge by closely coordinating transportation with land use planning to reduce growth in travel demand. For example, New Jersey’s wildlife action plan specifically recommends setting up joint working group with the state DOT (*NJ CSWS Summary* at 3). The plan recognizes that New Jersey’s “extensive road network fragments habitat, causes significant wildlife mortality and can present significant barriers to wildlife movement” (*NJ CSWS* at 21). New Jersey presents an important opportunity in one of the nation’s most urbanized regions to advance dual transportation and habitat protection goals, especially in parts of the New York Metropolitan watershed such as the New Jersey Highlands. In addition, the New Jersey Turnpike (I-95) is a pre-NEPA Interstate Highway with severe habitat impacts, especially on the New Jersey Meadowlands. The Turnpike is a prime candidate for an asset lease through a public-private-partnership that could contribute up to \$22 billion to state coffers. Lease terms or lease revenues could be

leveraged to retrofit this asset to restore hydrologic flows and improve wildlife permeability as a condition of any such lease.

**North Carolina:** North Carolina DOT has taken a pro-active role in habitat mitigation by entering into a collaboration with the Department of Environment and Natural Resources (DENR) and the U.S. Corps of Engineers (COE) to establish and fund an Ecological Enhancement Program (EEP). The NCDOT and COE place mitigation funds into the EEP program based on projected wetland losses through implementation of the 10-year state transportation improvement program (STIP). The EEP, located within DENR, manages these funds to identify, protect and restore degraded wetland habitat on an ecosystem-wide basis. Over the last 10 years more than 30,000 acres of wetlands have been protected and restored in this manner. North Carolina is in the process of building I-73/I-74, a High Priority Interstate project through its western region and reconstructing I-95 through its Eastern Region. Both projects could benefit from on-site wildlife mitigation through permeability improvements (overpasses and underpasses) and off-site mitigation through the innovative EEP program.

**Pennsylvania:** Pennsylvania, a state of hills and valleys, has more than 5,900 substandard bridges. The cost of reconstruction to bring them up to state standards is estimated at \$8 billion. With few funds left for system improvement, Pennsylvania is considering leasing or mortgaging the Pennsylvania Turnpike to raise approximately \$14 billion to meet these needs. This presents an opportunity both to: (1) overlay maps of defective bridges with wildlife habitat maps to determine if some defective bridges could be decommissioned and converted to wildlife overpasses as a wildlife action plan initiative; and, (2) embed wildlife permeability as an objective of any lease agreement concerning the Pennsylvania Turnpike. Funding could be provided through: (1) an up-front royalty payment; (2) making permeability retrofits a condition of the lease itself; (3) the federally-assisted bridge program; or, (4) use of NHS funds to achieve this objective since the Pennsylvania Turnpike is part of the NHS.

**Washington:** Washington's wildlife action plan identifies the transportation system as a significant conservation problem for the North Cascades Ecosystem, observing "[w]hen highways fragment landscapes, they divide wildlife populations into smaller, isolated units that are more susceptible

to extirpation” (WA CSWS at 360). With respect to “incompatible transportation development,” the plan states “[l]arge highway corridors (including Highways 20, 2, and I-90) and associated development fragment suitable habitat and create barriers or impediments to movement for gray wolf, wolverine and lynx” (WA CSWS at 362). Conservation actions recommended by the plan for this ecosystem include: “Work with the Washington Department of Transportation to locate highways away from important wildlife habitats and biodiversity areas. If impacts are unavoidable, design adequate mitigation such as underpasses, overpasses and fencing to accommodate wildlife that need passage, such as elk ... and western toad” (WA CSWS at 369). Washington’s state DOT has a history of collaboration with conservation and environmental groups, including cooperative action to increase the wildlife permeability of the I-90 Corridor through the Cascade Mountains down to Puget Sound. This area, which is bounded in long stretches by National Forest lands, has high habitat value. In addition, the Cascade Land Conservancy (“CLC”) has adopted the goal of preserving 1.26 million acres of land along the western slope of the Cascades, including seven watersheds, as working farms, forests, and natural areas (see [www.cascadeagenda.com](http://www.cascadeagenda.com)). The Sierra Club is working with Washington DOT and the USFS to map wildlife routes, identify appropriate I-90 crossing sites and plan for wildlife and water passageways as a component of on-going I-90 reconstruction. Protection of the western slope of the Cascade Range from sprawl development will also reduce demand for new infrastructure in this area and allow Washington DOT to focus its capital funds on bridge reconstruction and transportation improvements in the Tacoma-Seattle-Everett Urbanized area. Implementation of these conservation activities could be funded through the USFS Roads Program, Washington DOT’s Interstate Reconstruction and Maintenance Funds, STP funds and private donations through collaboration with CLC and private philanthropists.

## **Conclusion**

State fish and wildlife agencies must take the initiative in working with their constituent groups to engage in the various transportation planning programs in order to implement wildlife action plans for species and habitats where plans indicate significant direct and indirect impacts of surface transportation projects. While state and federal transportation agencies may have enhanced flexibility – and resources –

they lack related information and expertise, are focused on transportation-related outcomes, follow complex decision-making processes, and use a vocabulary that is alien and arcane to outsiders. Implementing state wildlife action plans will require more than willing transportation agencies. It will require proactive engagement by wildlife agencies and their constituents to understand transportation planning and funding approaches, to master the relevant vocabulary, and to offer relevant expertise in a timely fashion. Most important, it will require that wildlife agencies and their constituencies acknowledge appropriate and worthwhile transportation needs and goals. Wildlife advocates must lead in finding ways to meet these goals that simultaneously advance wildlife outcomes and implement relevant features of state wildlife action plans.

**Authors' Note:**

Mark Van Putten is founder and President of ConservationStrategy LLC, a conservation policy consulting firm based in Reston, Virginia. ConservationStrategy has extensive experience working with clients on projects involving state wildlife action plans, including projects with the Association of Fish and Wildlife Agencies and working with the Federal Highway Administration on incorporating state wildlife plans into the FHWA's new "Eco-Logical" guidance for federal transportation planning. Prior to founding ConservationStrategy in 2003, Van Putten spent 21 years on the staff of National Wildlife Federation, including nearly eight years as President & CEO. As NWF President, Van Putten made passage of the Conservation and Reinvestment Act and funding of state wildlife grants NWF's top federal legislative priority.

Dave Burwell has over thirty years of experience working on transportation policy reform and community-based transportation planning. His present work focuses on helping state DOTs change their planning and project-development processes to be more context-sensitive. Burwell recently served as Senior Vice-President for Transportation at the New York City-based Project for Public Spaces where he helped manage place-based transportation projects. Burwell was co-founder, Chair and CEO of the Surface Transportation Policy Project was co-founder and President of Rails-to-Trails Conservancy from 1986-2001.

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