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FISCAL IMPACT REPORT

ORIGINAL DATE 01/27/10

SPONSOR Feldman LAST UPDATED _____ HB _____

SHORT TITLE Use Pollinator-Friendly Plants In Landscaping SM 9

ANALYST Pava

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY10	FY11		
	NFI	Recurring	

(Parenthesis () Indicate Expenditure Decreases)

* See Narrative

SOURCES OF INFORMATION

LFC Files

Responses Received From

Department of Agriculture (DOA)
 General Services Department (GSD)
 Economic Development Department (EDD)
 Department of Game & Fish (DGF)
 Energy, Minerals, Natural Resources (EMNR)
 State Land Office (SLO)
 Department of Transportation (DOT)
 Public Education Department (PED)
 Higher Education Department (HED)
 Association of Counties (AOC)

SUMMARY

Synopsis of Bill

Senate Memorial 9 requests that state and county agencies, municipalities, universities, colleges, and public schools use existing resources to use pollinator friendly plants in landscaping projects. It is directed at increasing public awareness of the importance of pollinators, and increasing the use of pollinator-friendly plants. It requests appropriate institutions to study and plan pollinator conservation projects. It requests the designation of a pollinator appreciation week by the Governor.

FISCAL IMPLICATIONS

There is no appropriation indicated.

GSD notes: The fiscal implication could be great if the aforementioned entities are required to replace all existing native flowers and plants with “pollinator friendly” plants. The cost would be much less if pollinator-friendly plants were used during new landscaping or when replacing plants that have died.

DOT notes: The requirement of signs on projects indicating what DOT is doing in this regard at all vegetated rights-of-way would add to project expenses. There could be costs associated with the seeding requirement itself, in addition to the signing, but the associated costs are unknown at this time.

SIGNIFICANT ISSUES

HED notes: Nationally, bees pollinate \$15 billion worth of crops, according to the United States Department of Agriculture. Pollination is critical to approximately 80% of all crop plants and a third of all food consumed.

The act of pollination occurs when pollen grains are moved between two flowers of the same species by wind or animals. Successful pollination results in the production of healthy fruit and fertile seeds, allowing plants to reproduce. Pollinator friendly plants are those that encourage the life and sustainability of the insects and animals that aid in the pollination of plants.

Feral honey bee populations in the US have dropped about 90% in the past 50 years, except for the Southwest where they have been replaced by Africanized bees. At the same time, managed honey bee colonies have dropped by about two thirds.

A National Academy of Sciences report on the Status of Pollinators recommends:

- improving our scientific understanding
- increasing awareness about the importance and fragility of pollinators and their role in our food supply and healthy ecosystems
- taking action to protect pollinators and their habitat

PED notes: A major National Academy of Sciences report stresses the global need to improve scientific understanding, increase awareness about the world of pollinators, their importance to our food supply, and critical impact on healthy ecosystems. It recommends action to protect pollinators and their habitat. It’s known that forces like habitat destruction, improper use of pesticides, invasive species and global warming are placing the pollinator world at risk. The widespread loss of honey bee colonies from Colony Collapse Disorder (CCD) has received media coverage across the US including the NY Times, the CBS Nightly News, and the Christian Science Monitor. At this time the cause of CCD remains a mystery. It may be one or more factors, such as parasitic mites, disease, pesticides or diet.

The European honey bee is the most important single crop pollinator in the United States. Many scientists feel that native pollinators – specifically, native bees – can be an insurance policy for honey bee scarcity. However, with the decline in the number of managed honey bee colonies from diseases, parasitic mites and Africanized bees - as well as from Colony Collapse Disorder -

it is important to increase the use of native bees within the US agricultural system. Collectively, native bees are more versatile than honey bees. Some species, such as mason bees, are active when conditions are too cold or wet for honey bees. Many species are more efficient at moving pollen between flowers. Bumble bees and several other native species can buzz pollinate flowers - vibrating the flower to release pollen from deep inside the pollen-bearing anthers - which honey bees cannot do. Crops such as tomatoes, cranberries and blueberries produce larger, more abundant fruit when buzz pollinated. As a contributor to the national agricultural system, NM needs to know the importance and ramifications of pollinators within the state.

Hundreds of species of native bees are available for crop pollination. Research from across the country demonstrates that a wide range of native bees help with crop pollination, in some cases providing all of the pollination required. These free, unmanaged bees provide a valuable service, estimated recently by scientists from the Xerces Society and Cornell University to be worth \$3 billion annually in the U.S.

Pollinators are essential to the environment. The ecological service provided by pollinators is important for the reproduction of nearly 75 percent of the world's flowering plants. This includes more than two-thirds of the world's crop species, and one in three mouthfuls of the food that we eat. The US alone grows more than 100 crops that either require or benefit from pollinators.

Beyond agriculture, native pollinators are keystone species in most terrestrial ecosystems. Fruits and seeds derived from insect pollination are a major part of the diet of approximately 25 percent of birds, and of mammals ranging from deer mice to grizzly bears.

The GSD Building Services Division (BSD) currently utilizes native pollinator plant species in its landscaping; therefore, there would be no significant issues. The GSD Property Control Division (PCD) currently uses native flowers and plants (mostly evergreens) and could ensure that native pollinator plant species are used during new and future landscaping projects.

EDD continues to assist rural areas of the state to develop or sustain current industries. Agriculture (value-added) is one area that would benefit from a education campaign on the role of pollinators.

DFG notes: The use of native plants in landscaping, reclamation and habitat enhancement is currently widely accepted. A number of governmental agencies including federal currently require the use of native plant species including pollinator/friendly plants in these types of projects. Native plant species provide much greater benefits to native wildlife species including those species that rely on pollinating plants for their survival. It should be noted that some non-native plants provide pollinator opportunities and that the use of native plants in habitat projects is highly encouraged. It should be recognized that some plants (including native grasses, pines, and junipers) are wind pollinated and do not directly benefit pollinators. Some of the native wind pollinated plant species require less water to survive and grow than some herbaceous plants which could reduce water demands for landscaping.

EMNRD - Forestry Division (FD) encourages forest owners to manage forested lands in for diversity of native plants and animals, which would include native pollinators. They also distribute thousands of native woody plant seedlings to landowners that provide food for larval-stage butterflies and nectar and pollen to adult butterflies, bees, etc. Mining and Minerals Division (MMD) requires the use of native plant species in all mine reclamation MMD either conducts or regulates. The native plant species will include native pollinators.

SLO already complies with this memorial in that they utilize native eco-region specific species for restoration and reclamation projects. For future landscaping, native pollinator-friendly plants are no more expensive than regular plants, so there would be no additional fiscal impact.

DOT plants significant amounts of rights-of-way vegetation. Under some municipal and county laws particular allergens or messy seed producers (examples: female junipers & cottonwoods, respectively) are prohibited by local ordinance (e.g. the City of Albuquerque), and NMDOT must use sterile varieties or non-flowering clones. In these localities, NMDOT could not comply with SM 9. Signs describing the vegetation would have to be outside the clear zone and would have to be large enough to enable passing vehicle occupants to read them.

PERFORMANCE IMPLICATIONS

For those entities described in this memorial, it could add some performance measure oversight needs in the way of training, project oversight or additional task orders.

EMNR FD and MMD will continue to emphasize landscaping with native pollinator-friendly plants and educate seedling buyers on the pollinator benefits of the plant species they select to plant (e.g. ash trees support caterpillars for swallowtail butterflies).

DOT could not comply with this memorial in all locations throughout the state.

PED notes: Although passage of this memorial will likely provide resources that may improve student knowledge of plant pollination and its impact on the environment, this memorial includes no performance implications related to the New Mexico State Standards Based Assessment Test in science.

ADMINISTRATIVE IMPLICATIONS

SM 9 requests collaborations with scientists and organizations like the North American Pollinator Protection Campaign occur to study and plan pollinator conservation projects for New Mexico. GSD - PCD would specify that new landscaping requirements in future contract would have specifications for “pollinator friendly” plants and flowers.

DFG notes: Entities may choose to develop educational signage in conjunction with pollinator-friendly landscape developments to maximize public awareness and this may have associated costs.

SLO notes: If signs are purchased to identify pollinator-friendly plants in the landscaping around office buildings there could be associated costs. Reclamation and restoration projects around the state would not utilize these signs because the vast majorities are too remote from traffic for cost-effective communication.

There is no fiscal impact to collaborating with scientists and organizations to study and plan pollinator conservation projects, other than minimal man-hours (5-10 hours per year)

Association of Counties notes that counties would have to work with the local NMSU extension agent or a plant specialist to identify pollinator-friendly plants to use.

NMDOT could not comply with this memorial in all locations throughout the state.

During project development landscape design, pollinators would have to be considered, whereas DOT normally uses seed mixes that contain plants that are easily adaptable to the environment.

PED notes: Compilation of content required for uniform dissemination has not been developed; textbooks are not identified and it is not known if they exist; teachers lack adequate professional development necessary to address instruction. An alternative option would be to expand on an existing science course to include a few weeks of plant pollination education, or to develop a new IDEAL-NM high school online unit or course about plant pollination and its impact on the environment, which would carry fiscal impact. However, these options would need to be aligned with current high school science standards.

CONFLICT & DUPLICATION

DOT notes: SM 9 conflicts with some local ordinances. SM 9 duplicates HM 4.

TECHNICAL ISSUES

Several New Mexico native plant lists are available for reference. A reference to a compiled list may be of value in determining what species would qualify under this memorial.

SLO notes: Collaboration with scientists and other organizations already occurs on a variety of natural resource issues, such as brush control. Coordination on pollination conservation projects would probably benefit the State Land Office in the availability of grant monies for restoration and availability of data on ecological health and productivity. The increased presence of pollinators in New Mexico will positively impact the diversity and health of rangelands and forests on state trust lands.

OTHER SUBSTANTIVE ISSUES

EDD currently supports statewide Agriculture and Value-added Agriculture initiatives as regional economic drivers.

DOA notes: There is increasing awareness of the crucial role pollinators play in agriculture at all levels. Much research is being conducted and a concerted effort by state agencies and the public to participate in landscaping and growing activities through home gardening, commercial landscaping, and other agricultural industry endeavors to attract beneficial pollinators would be a step in the right direction. In addition to the entities named in SM 9, the cooperative extension service, master gardener program, and New Mexico State University's College of Agriculture, consumer and environmental services could provide valuable leadership in this effort.

ALTERNATIVES

DFG suggests: On page 3, in the first "be it resolved" paragraph (lines 20-25), the Department suggests an amendment to add a comma in line 24 between the words "projects" and "to". This will make it clear that all landscaping projects should consider pollinator species. As the memorial reads now, it could be construed to only apply to landscaping projects designed specifically to create pollinator habitats.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

Failure to pass this memorial may delay needed public attention on a critical ecosystem issue. Without this legislation GSD- BSD & PCD would continue to landscape state property with a native xeriscape. If SM 9 is not enacted, there will be no change in public awareness regarding the importance of pollinators and an opportunity to further educate its youth, citizens, and governing entities on the far-reaching role pollinators such as bees and butterflies play. The impact of the pollinators and pollinator-friendly environments reaches into agricultural production, economic opportunities, environmental issues, and education awareness.

Not enacting this memorial would diminish an opportunity to emphasize a particular week for the appreciation of native plants and pollinators and to educate the public on the importance and desirability of providing habitat for native pollinators that are essential to ecological and economic functions in New Mexico.

Plant pollination education would not be formally taught in high school but only in universities, missing, therefore, the majority of high school students not seeking higher education.

CP/svb