Agriculture

The following appropriation requests were received by the offices of Senator Merkley and Senator Wyden. These requests have not been vetted or approved by the Senate offices, and their inclusion in this list does not indicate any judgment about the projects' value, appropriateness, or likelihood of receiving funding. Every funding request has been included, and project summaries have been draw verbatim from applicants' proposals. Not all of the requests received by both Senators will be submitted for funding consideration to the Senate Appropriations Committee, and that Committee will then select a limited number of projects to fund from each state.

The following appropriations for Oregon are being considered for inclusion in the Agriculture appropriations bill for fiscal year 2010.

Wolf Creek Water Enhancement Project- $3,000,000
Powder Valley Water Control District, North Powder, OR
This project will install an irrigation water delivery system to eliminate the majority (if not all) diversions in the Wolf Creek channel below Wolf Creek Dam. The Project would allow continued flood irrigation during spring runoff to recharge ground waters, thus allowing for additional late season return flows to Wolf Creek, increasing fish and wildlife habitat. The project would also provide pressurized sprinkler irrigation later in the season to conserve existing stored water.

Morgan Lake Dam Diversionary Channel- $1,000,000
City of La Grande, La Grande, OR
This request will construct an aqueduct diverting water from Deal Creek to Sheep Creek. It has been identified that should the Morgan Lake dam be breached, the resulting impacts would be catastrophic to residential areas located on the west side of La Grande. Flows would be accelerated and concentrated due to extremely steep terrain and the proximity of the city. Constructing a channel across a nearby ridge would place the potentially impending water into a nearby Sheep Creek drainage causing the breeched water to be discharged into the Grande Ronde River. This diversion would avert an extremely dangerous situation that could involve loss of life, and would place flows in a more accommodating and adequate channel. The diversionary channel would only be used in case of dam

failure.

Developing Greener Products for the Forest Products Industry- $1,000,000
Hexion Specialty Chemicals, Springfield, OR
Hexion proposes to collaborate with Saginaw Valley State University to conduct research into the development of sustainable bio-derived binders for use in the forest products industry. Various crosslink systems made from bio-derived materials would be explored to identify the most promising candidates for use as binders in forest products. Current development work has shown conceptually that side streams of biofuel production can be used in adhesive applications. Using this conceptual approach, Hexion would leverage current research at Saginaw Valley State University to identify additional and potentially improved chemical pathways for producing binders from biomass.

North Hills 1st Level Water Reservoir Improvements- $1,000,000
City of Corvallis, Public Works Department, Corvallis, OR
This project provides for the design and construction of water reservoir improvements to an existing reservoir to lengthen its life and improve its capacity to withstand a seismic event. The project is based on an engineering evaluation of the reservoir.

Marys River Water Main Crossings- $1,216,200
City of Corvallis, Public Works Department, Corvallis, OR
Two important links in Corvallis' water distribution system are located on bridges crossing the Marys River. A recent seismic evaluation has determined that these two crossings are at risk in the event of an earthquake. This project would remove the water lines from the bridges and place them under the river where they would be more protected in an earthquake.

Potato Research (several states)- $1,800,000
Oregon State University, Potato producing counties across the Pacific Northwest
This multi-state project works to develop and commercialize new potato varieties that will directly benefit all segments of the Northwest potato industry and indirectly benefit all US producing regions. The funds are used to develop and identify varieties with high yield, improved processing quality, genetic resistance to major pests and diseases, higher levels of resistance to stresses, increased nutrient use efficiency, improved human nutritional value, and high tuber quality.

An additional environmental benefit comes with reduced use of pesticides, water, and fertilizers, which are normal by-products of improved varieties.

Organic Cropping Research-$800,000
Oregon State University, Oregon & Pacific Northwest
The purposed research will investigate the problems facing Oregon's organic industry, and will enhance Oregon agriculture's competitiveness in the marketplace. Last year's research activities created an "Organic Fertilizer Calculator"; determined appropriate size and spatial distribution of beetle banks for pest suppression; assessed availability of, established selection criteria for, and evaluated vegetables for organic farming systems; developed weed management strategies for producing organic legume and grass hay; and began the development of an organic cereal production system.

Multi-Commodity Research (OR)- $400,000
Oregon State University, Portland, OR
This proposed project will enhance the competitiveness and expand the economic value-added component in Oregon agricultural products. The team will conduct research to support food processing and food product development, investigate consumer perceptions of product quality and value, and evaluate marketing and food industry strategies. These studies will improve the ability of new and existing food producers and processors to satisfy consumer and market demand and to achieve success through business and marketing strategies suitable to the small and medium sized firms of the Northwest. In conjunction with the Food Innovation Center the aim is to provide an integrated program of research, educational programs, and technical services designed to enhance regional capability for innovation in food processing and marketing.

Enhancing Barley Through Genomics-$800,000
Oregon State University, Corvallis, OR
The proposed research will coordinate a research plan to apply genomics tools to four research areas in Minnesota, North Dakota, Oregon, Washington, and Wisconsin all areas that have the greatest potential for success to increase barley production - winter hardiness; drought tolerance; disease resistance; and quality. This research will be supported by a tight and coordinated network of Land Grant University and ARS scientists with linkages to the private sector. These researchers are currently supported by Federal, State, and local government

agencies, grower self-assessment, and industry grants. There is not sufficient competitive grant funding for this type of applied molecular plant breeding and variety development. Grower and industry support is constrained by declining acreage.

Wood Utilization Research-$750,000 (allocated to OSU)
Oregon State University, Corvallis, OR
The WUR Program is a multi-state research and outreach program that initiates creative and innovative science, technology and advanced business practices that: enhances the domestic and global competitiveness of the US wood products industry; fosters sustainable and environmentally acceptable product manufacturing and forest operations; and leads to greater and more efficient use of renewable wood-based materials. This is a continuing program of the Oregon Forest Research Laboratory and supports a series of specific research projects and graduate education. This program involves 13 universities in Oregon, Mississippi, Michigan, Maine, North Carolina, Louisiana, Minnesota, Tennessee, Montana, Washington, Idaho, Alaska, and West Virginia.

Northwest Center for Small Fruits Research, Small Fruits Initiative - Plant Improvement-$1,100,000
Northwest Center for Small Fruits Research, Corvallis, OR
Funding will be used for:

- Small Fruits Pathology Program. Small Fruits crops are susceptible to infection by fungal and bacterial diseases significantly impacting fruit quality. Funding will be used for: New ARS small fruit pathologist; Cooperative research between ARS and Oregon State University, Washington State University, or University of Idaho.
- Site Feasibility Study and Phase I Design for Additional or New Research Facilities. Current facilities are overcrowded, with some needing replacement or upgrade. The feasibility study is needed to determine the best approach to move forward.
- Competitive Research Grants. The competitive grants program funds peer reviewed research projects that help enhance profitability and sustainability of the small fruits industry.

Greenberry ID Phase 3 Pipeline Project-$988,910
Greenberry Irrigation District, Corvallis, OR

This shovel-ready irrigation pipeline project has completed NEPA Environmental Assessment with a FONSI, and all permits are in place. The project will add capacity to Greenberry Irrigation District (GID) infrastructure, and allow it to fully serve all district members as well as other area water needs and planning level projects including: the Augment Muddy Creek summer water flows, Water re-use project with City of Corvallis and the Finley National Wildlife Refuge for water irrigation. The proposed funding will also add the second 30" HDPE pipeline from the GID point of diversion on the Willamette River to the RR tracks west of Highway 99W. This request includes a pump station on the Willamette, 15,660 feet of 30 inch HDPE pipe, incidentals, and installation.

Benton County Fairgrounds Waste Water Collection and Drainage Project- $210,200

Benton County, Corvallis, OR

This project proposes designing a green technology solution to treat surface animal wastes through a manmade wetland. The project will intercept and manage animal waste to bring the site into compliance with Oregon Department of Environmental Quality (DEQ) regulations. The end product will allow discharge into a fish bearing stream. Components include construction of a wastewater drainage collection, storage and field application system to properly manage runoff from animal wastes at the fairgrounds. The project will include underground drainage pipes directed to two collection sumps. The collection sumps will transfer wastewater into a large storage and supply tank, which will then be pumped onto constructed wetlands. The surface areas where animals are handled outside of the buildings will be resurfaced to direct wastewater runoff into the collection drains and sumps. The animal solid waste storage building will be relocated next to the wastewater collection and storage tank.

Small Fruit Research (OR, WA, ID)- $500,000

Oregon State University, Corvallis, Hood River, Aurora, Salem, Coos Bay, OR

The proposed funding will provide Northwest Center for Small Fruits Research (NCSFR) monies for competitive grants used to enhance profitability and sustainability for a number of crops. Crops include blueberries, strawberries, raspberries, blackberries, cranberries, table grapes, wine grapes, huckleberries, gooseberries, and black currants. Research priorities for each small fruit crop are established by the combined efforts of industry representatives and scientists. The priorities are based on constraints on production and processing in the areas

of breeding, integrated pest management, physiology, enology, small fruit horticulture, and genetics. The priority setting process ensures an effective means to respond to current challenges within the small fruits industries.

Molluscan Shellfish, OR-$600,000
Oregon State University, Newport and Corvallis, OR
This program funds a selective breeding program to improve broodstock and increase commercial production of Pacific oysters on the West Coast. In 2007 and 2008, shellfish hatcheries on the West coast have struggled to produce oyster larvae (seed) due to unknown factors that seem to be linked with a change in ocean conditions. This lack of sufficient amounts of seed jeopardizes the West coast oyster industry and is the most serious challenge that the industry has faced since hatcheries were built in the mid-1970's. In FY 2010, OSU is requesting funds 1) to carry out research to address the problem(s) of rearing oyster larvae in West coast hatcheries; 2) to continue the breeding program to improve yields and other desirable qualities of Pacific oysters, and 3) to implement a new breeding program for Kumamoto oysters.

Creswell Wastewater & Sewer Improvements-$2,783,000
City of Creswell, Creswell, OR
Funding will be used for planning, engineering, and construction of public wastewater facilities. Currently the east side of the City is served by a private wastewater company. The project includes construction of a raw sewage pump station at the existing private Emerald Valley wastewater treatment plant and construction of a force main from the new pump station at the existing Nieblock interceptor to the west side of the I-5 freeway.

Canada Goose Agricultural Depredation Control Plan-$2,000,000
Oregon Department of Fish and Wildlife, NW Oregon
The proposed funding will address the problem of increased goose damage to agricultural crops in the Pacific Northwest. To be most successful, plan activities will be continued for several years to allow development of programs to influence goose use of private lands. The NW Oregon / SW Washington Canada Goose Depredation Working Group will continue to work toward establishing a long-term program to lessen the economic impact of increased goose use of this region.

Eastern Oregon Grasshopper Outbreak Suppression-$170,000
Oregon Department of Agriculture, Elgin, Baker City, OR
The Oregon Dept of Agriculture proposes to implement a grasshopper management program to suppress the grasshopper populations in Eastern Oregon in order to reduce the economic impact on public and private rangeland and crops. Starting in 2007, Eastern Oregon has seen a large buildup of grasshoppers. Surveys recorded economic infestations of grasshoppers stretching from Elgin in Union County to Baker City in Baker County. Economic levels are 8 grasshoppers per square yard and above. In 2008 the grasshopper densities reached highs of up to 200+ grasshoppers per square yard in several locations. More than 15,000 acres were privately treated with pesticides to suppress the grasshopper populations. The potential economic damage to crop and rangeland in Eastern Oregon could range from $500,000 to $1,500,000.

Goose Depredation Project- $1,000,000
Oregon Farm Bureau Federation, Salem, OR
Proposed projects include projects to protect threatened and endangered animal/plant species, natural areas, game species and other valued wildlife. The $1,000,000 request OFBF is making for the Wildlife Services Program is specifically for the management of the goose population in Oregon to directly assist landowners in managing the birds and protecting their crops and land.

Relocating Seaside School District out of tsunami zone- $10,000,000
Seaside School District, Seaside, OR
The project proposed to relocate schools within the Seaside School District out of the Tsunami Zone of the Pacific Ocean. Funds would be spent on site selection, environmental impact statements, and will begin construction for two elementary schools, one middle school and one high school.

Columbia River Gorge National Scenic Area Economic Development- $25,000,000
Oregon Investment Board, Wasco, Hood River, Multnomah Counties, OR
Funds are needed to continue the economic development goals of the Columbia River Gorge National Scenic Area (CRGNSA). The request is for $25 million for the 25th anniversary of the National Scenic Area Act to be distributed equally to the Investment Boards through the Oregon Economic and Community Development Department and Washington State Community Trade and Economic

Development. Federal legislation created the CRGNSA and became law on November 16, 1986. The establishment of the National Scenic Area resulted in unique needs and approaches to economic development, restricting some of the traditional approaches to economic development. As such, the Act included both resource protection and economic goals. Since creation of the Act, however, implementation and funding of the Act has been unbalanced; favoring resource protection over economic goals. Both Oregon and Washington Investment Boards have a proven track record for job creation and investments that result in long-term economic impact. The Oregon Investment Board and the Washington Investment Board request support for new appropriations, recognizing the importance to balance both resource protection and economic vitality in the National Scenic Area.

The Medusahead Challenge- $1,000,000
The Medusahead Challenge, Baker, Crook, Grant, Harney, Klamath, Lake, Malheur, Morrow, Umatilla, Union, Wallowa, OR
This outcome-based program outlines 14 separate large-scale management activities, 27 research projects, and 14 educational programs necessary to protect the Great Basin from a serious weed problem. This project aims to implement the Strategic Plan. Land owners and managers, researchers, and educators throughout this region developed a consortium to address this serious problem. Coordinating with the Agriculture Research Service office in Burns, Oregon, a strategic plan has been developed that outlines a three-component program to management these weeds throughout the region. The components are research, education, and medusahead management. The problem is that Medusahead, and other annual grasses, are destroying the agricultural sustainability, ecology, and fires regimes of the Great Basin and surrounding ecosystems. These weeds have invaded about 27 million acres, and are spreading across the region at an alarming rate in association with elevated atmospheric CO2 levels. These weeds displace native vegetation on which much of the rural economies depend. Annual grasses create serious fire conditions, and frequent fires pose major environmental and health risk and are very expensive to fight.

John Day Fire Station- $800,000
City of John Day, John Day, OR
This project will propose a new station to house the John Day Volunteer Fire Department and the John Day Rural Fire District with good access and parking and

will meet all OSHA and ADA requirements. The current John Day fire station was built as a temporary structure in the 1950s; and it does not meet OSHA requirements and is located at the intersection of 395 and SE Dayton that creates a bottleneck during any activities at the station; non-existent parking and staging areas creates a need to completely close the intersection during a fire emergency. The new fire station will be significantly larger than the existing facility to accommodate the modern trucks, office space, and space for training. The present station misses the mark on all three points and because the current station is located in a very congested area downtown there is no room for expansion. The City of John Day purchased the land that houses the new station, and the City expects to erect a steel structure with slab on grade construction. The building will have sufficient space for maintaining the vehicles and equipment year round and have sufficient space that it can serve as an emergency coordination center depending on circumstances.

City of Condon Water Improvement Project- $1,608,500
City of Condon, Condon, OR
The City of Condon is proposing to construct approximately 8,000 linear feet of Phase I & II of the City's Water System Master Plan. The proposed construction project will replace undersized waterline, plus other pipe that is approximately 90 years-old. The project will increase the efficiency of the water distribution, and provide an increase in fire protection through the availability of water and new hydrants.

Spalding Sewer Lift Station- $2,340,000
City of Grants Pass, Grants Pass, OR
Funding for this project will be used to install a sewer system in the Spalding Industrial Park, located on the western side of Grants Pass. Installing a sewer system will enable the City to actively recruit larger industries to the area, helping to stimulate the local economy and create jobs. Grants Pass is located in a county identified by the State of Oregon as "severely distressed." Unemployment has grown well over 11% with no signs of slowing. Funding the infrastructure needed to develop this industrial park will enable the City to provide large parcels of land (more than 10 acres) needed to attract larger industries. It would allow the City to actively recruit businesses requiring a larger workforce (300-500 employees) in addition to those smaller businesses (with an employee base in the 150-200 employee range) currently pursued by the City. Attracting larger industries to the

area will provide a means for the City to help address area unemployment and improve cash-flow in the local economy that will further support other area businesses.

Old Highway 62/Royal Avenue Water Main Replacement- $450,000
City of Eagle Point, Eagle Point, OR
This project will replace an old and aging 6 inch asbestos cement waterline on Old Highway 62, with a 12 inch waterline to provide additional capacity to the City's water system.

City of Eagle Point Reservoir Retrofit- $2,970,000
City of Eagle Point, Eagle Point, OR
This project will retrofit an existing 4 million gallon Federal reservoir to supply water to the residents of Eagle Point. The reservoir was used to supply water to the local Camp White, home at one time to more than 40,000 troops. By retrofitting the reservoir, the City of Eagle Point will save more than $1 million over construction of a new facility. The existing water system will be extended to meet the refurbished reservoir to provide a much needed expansion to the City's water system.

Water Treatment Plant Intake Replacement-$600,000
City of Oakland, Oakland, OR
This project will involve engineering, planning and construction of the replacement raw water intake. The City of Oakland water treatment facility has struggled with sand and sedimentation clogging the raw water intake and damaging the raw water pumps as well as causing damage and maintenance problems throughout the water treatment plant. The system's water source is Calapooya Creek, which has heavy sediment load and high turbidity. Sedimentation is unusually heavy, possibly due to an upstream dam that was removed a few years ago, and should remain heavy for a number of years. The City does not have access to sufficient land to construct a settling pond, which would be the ideal solution to the problem, but has identified a potential deep water location on the Calapooya approximately 800 feet from the existing raw water intake.

City of Winston Wastewater Re-Use Project-$8,500,000
City of Winston, Winston, OR

The plan is to pipe 10 million gallons of treated wastewater from Winston/Green treatment plant to Wildlife Safari for use in the park. Currently the Safari pumps 8 million gallons from the South Umpqua River for animal park use. This is not enough water for the park in the summer months. This project will remove the Winston/Green treatment plant as a point source discharge in the South Umpqua River. It will remove the need for the Safari to pump from the River. This is a "Green Project." Project will include various new filtering ponds and holding compounds, pump station, transmission lines, irrigation systems, testing and monitoring sites, Landscaping ponds for environmental filtration. This project will employ 40+ skilled and unskilled construction workers.

Water Line Replacement Project-$10,000,000
City of Port Orford, Port Orford, OR
The proposed project will replace a water line within Port Orford. The City of Port Orford has approximately 15 miles of water distribution system, all of which is beyond its designed useful life. Approximately 12 of those miles consist of cement/asbestos pipe, which is old and deteriorated due to natural processes. Some of this system was installed in the 1940s and 1950s, and is well beyond useful life. At the present time, the City is losing over half of its treated water to leaks. The City has diligently searched for the leaks, and has hired leak detection firms to conduct surveys of their system. The City has sandy soils, and the leaks often don't surface where they can be easily detected, thus replacement is necessary.

Waste Water Collections Line Replacement Project-$15,000,000
City of Port Orford, Port Orford, OR
The City of Port Orford has approximately 15 miles of wastewater collection system, all of which is beyond its designed useful life. Some of these lift stations were built in the 1960s and are well beyond their design lifetimes. All of the pipes were installed in the 1940s and 1950s, and they have become old and deteriorated, due to natural processes. At the present time, the City is treating more than double the amount of wastewater that would be expected to reach the treatment facility. This is called inflow and infiltration. They have searched for the leaks into the system but due to sandy soils, there are areas of significant ground water.

Hubbard Creek Impoundment Improvement Project-$2,000,000

City of Port Orford, Port Orford, OR
This project will ensure that the City of Port Orford has sufficient water to treat for the community needs. At present, the impoundment is too small to meet the needs of the community during the dry summer months. The creek has almost dried up several different years. The City is presently using all of the stream flow to provide water to the City. This water comes from the impoundment and goes to the treatment plant for treatment before being delivered to the community water users. This project will enlarge the impoundment, which will them allow for an adequate supply of water. Having adequate water will allow for growth, and additional business to locate in the City.

Coos County Livestock Pavilion-$100,000
Coos County, Myrtle Point, OR
This project will provide cover for the livestock area at Coos County Fairgrounds for 4-H students who use during the year and for their auction during the Coos County Fair. The youth raise approximately $200,000 per year, of which most put towards college. The Fair has needed to rent tents in the past and can no longer afford to rent the tents for showing of animals.

Meadowfoam Research (OR) - $275,000
CSREES
The goal of this research program is to increase the supply of renewable industrial oils for United States manufacturers through use of the crop plant meadowfoam. Meadowfoam is a newer crop in the Pacific Northwest (PNW) that produces oil with unique chemical properties that are utilized by manufacturers of personal care products and are being explored for use as a fuel additive, as a component of vehicle lubricants and in pharmaceutical products. Meadowfoam meal, a by-product of oil extraction, also has unique properties and research into use of meal and meal extracts as biological pesticides and plant growth enhancing agents is underway. These materials may be of use in organic crop production systems. This project supports research in breeding and management practices for this alternative crop in the PNW as well as investigation into potential uses of meal. Presently, the United States is the sole supplier of this oil and meal. Industry and USDA-Agricultural Research Service are principal partners. We expect the breakdown to be similar to how the FY08 funds will be distributed:
Professional Faculty - 65%
Student labor - 10%

Travel, publications, supplies and services - 25%

Grass Seed Cropping (OR, WA, ID) - $500,000
CSREES
Over 90% of the United States' cool-season forage and turfgrass seed is produced in the Pacific Northwest. Currently, the grass seed industry faces some critical environmental and economic challenges including public pressure to phase out open-field burning; alleviation of smoke, dust, and chemical trespass from crop production areas; lack of integrated cropping systems; protection of genetic diversity and identification of germplasm diversity and identification of germplasm resources for alternate production strategies; and better utilization of post seed harvest residues. Interest is also growing in using grasses in pasture-based livestock feeding systems, in developing additional knowledge about both the beneficial and harmful effects of endophytes in grasses and in exploring additional options for use of grasses in providing ecosystem services. The purpose of competitive program is to maintain a sustainable grass seed cropping industry. Cooperating in the effort are research and extension faculty from Washington, Idaho, and Oregon, and scientists from the USDA-ARS National Forage Seed Production Research Center. Funds are allocated through a competitive grant process hence budget allocations differ within each funded proposal. In general, two thirds of funding is used to pay for labor (faculty research assistants, graduate students, undergraduate students or temporary workers) with remaining funds used for services, supplies, travel and a limited amount of needed equipment. Oregon-based scientists typically receive more than half of available funds.

STEEP III Water Quality in the NW (OR, WA, ID) - $1,000,000
CREES
The Pacific Northwest (PNW) area of Washington, Oregon and Idaho produces 13% of the nation's wheat supply and some 80+% of its soft white wheat for export. The inland PNW is unlike any other agricultural area in the U.S. Seventy-five percent of the annual precipitation falls during the winter. Deep, loess-derived soils effectively store this moisture and allow the region to produce the highest dryland winter wheat yields in the U.S. The predominant dryland crop rotation in eastern Oregon and Washington and southern Idaho is winter wheat-summer fallow, though rotations with one year of fallow in every three years of cropping, or no fallow at all, are also practiced. The silt-based soils are subject to water and wind erosion during the fallow phase of the cropping cycle, particularly

under conventional tillage, which leaves the soil surface bare. Eliminating or reducing tillage and leaving crop residue on the soil surface will reduce or eliminate soil erosion, but it also makes seeding and weed control more difficult, increases certain diseases, and affects nutrient management. The STEEP research grant has provided funds to develop cropping techniques such as direct-seeding, residue management, weed control, and disease and nutrient management, and the accompanying extension programs to facilitate the adoption of successful conservation farming techniques for the PNW. There is also a significant acreage of irrigated land in the PNW used to produce high value crops such as potatoes, vegetables for processing, and seed. Cereal crops are often grown in rotation with these high-value crops to break pest cycles and diversify the economic base. The use of conventional or intensive tillage has declined by more than 50% in the last twenty years with production shifting to reduced tillage and direct-seeding (no-till) systems. The increase in conservation farming systems has seen a corresponding 75% decrease in soil erosion and a 50% reduction in sediments in rivers. In this regard, the STEEP program has accomplished many of its initial objectives. However, Pacific Northwest agriculture continues to face many on-going challenges: rising input prices, increasing global competition, declining rural communities, and competing production and environmental goals. These come at a time when the U.S. is also facing new challenges related to global food and energy supply and price, national security, and economic stability. Agriculture can contribute solutions to many modern societal problems: increased energy and food security, reduced greenhouse gases, and improved international trade balance. However, developing sustaining solutions requires a long-term, integrative approach to research on a scale rarely implemented.

Enhancing Barley Through Genomics - $800,000
CREES

Barley is facing a crisis. Acreage has declined to historically low levels and the US is in danger of conceding domestic and world markets for barley, and its value-added products, to competitors from Australia, Canada, and Europe. This will have a substantial negative impact on federal, state, and local tax revenue. Throughout the US, climate change is resulting in increased abiotic (e.g., drought, cold) and biotic (e.g., disease, insect) stresses on all crops. Barley is among the most stress tolerant crops, and judicious investment in biotechnology will allow scientists to enhance this innate tolerance in order to maximize productivity, quality, and economic returns. The Regional Barley Gene Mapping Project, which

supported a directed competitive grant program, funded individual projects throughout the US that provided for significant advances in genomic science, but did not provide a coordinated approach to meet this crisis. Advances in genomic research provided by the previous special grant, and other efforts, provide a unique opportunity to address this crisis through a new special grant. Researchers in Minnesota, North Dakota, Oregon, Washington, and Wisconsin have developed a coordinated research plan to apply genomics tools to four research areas that have the greatest potential for success to increase barley production - winter hardiness; drought tolerance; disease resistance; and quality. We propose an $800,000 annual appropriation ($160,000 per state) for three years to support research in the five states. Most of this funding can be provided through an offset by using the current funding for the Regional Barley Gene Mapping Project. Barley is a cornerstone of American agriculture. It is the most stress tolerant of cereals, producing grain essential for the malting and brewing industries. Barley is a heart-healthy grain that will be a key ingredient in strategies to reduce obesity and Type II diabetes. Barley provides superior forage and feed for ruminant and non-ruminant animals. Barley provides farmers with an option to increase genetic diversity, use less irrigation water, and to be more profitable. Genomics is an umbrella term defining the study of naturally occurring genetic variation using the latest tools of biotechnology. Barley is unique in that in addition to its economic importance as a crop, it is also a model genetic system. A vigorous public sector research community, in cooperation with the private sector, has developed a robust set of genomics and molecular breeding tools. These discoveries in basic biology can be extended to practical applications and to other crops. This research will be supported by a tight and coordinated network of Land Grant University and ARS scientists with linkages to the private sector. These researchers are currently supported by Federal, State, and local government agencies, grower self-assessment, and industry grants. A recurring base of funds, over three years, is necessary to ensure the timely and effective application of currently available tools. There is not sufficient competitive grant funding for this type of applied molecular plant breeding and variety development. Grower and industry support is constrained by declining acreage. The total federal funds requested for Oregon is $160,000:
$112,000 Salary and OPE for two full time (1.0) FTE Faculty Research Assistants
$10,000 for two undergraduate research interns (hourly wage)
$33,000 Materials and supplies (includes OSU facilities rentals for farms and greenhouses)

$5,000 Travel (4,000 in-state for field work; 1,000 domestic out-state for conference)

City of Sumpter Wastewater Facility - $1,500,000
City of Sumpter, Ore.
Design and construction of a wastewater facility in a rural Oregon community that lacks a population base to financially support waste treatment in a manner that meets Oregon standards and assures community safety. The current system is unable to meet community needs, and high snow pack or another weather event could overrun the system.

Redmond Airport East Side Infrastructure Project - $4,500,000
Deschutes County, Redmond, Oregon
This project will design and construct water and sewer lines along the east side of Roberts Field (Redmond Airport) to open approximately 30 acres of airside property for lease. Funds will be spent to design and construct water and sewer lines along the east side of Redmond Airport to open approximately 30 acres of airside property for lease and will go toward engineering design and construction.

Blackberry Creek Culvert Replacement - $737,000
Port Orford, Curry County, Oregon
Blackberry Creek in the Rogue River-Siskiyou National Forest is an important tributary of Oregon's Elk River, one of the finest salmon and steelhead streams on the Pacific Coast. Blackberry Creek is crossed by a Forest Service road just upstream from its confluence with the Elk River. A large culvert is located under the road, which blocks passage for spawning fish. Replacing the culvert with a bridge will open up several miles of ideal spawning and rearing habitat for fall Chinook salmon, Coho salmon and winter steelhead. By opening spawning habitat, this project will add fish to the Elk River system. With recent commercial fishery restrictions slowing the region's economy, increased fish populations will benefit the fishery and commercial fishermen in the area. The project will also enhance water quality and aquatic habitat, benefiting recreational fishing and other activities that fuel the local tourism economy. Funds will be spent on planning and construction.

Tenmile Lakes Voluntary Water Quality Implementation Plan - $4,676,000
Coos County, Lakeside, Oregon

Funds will implement and monitor water quality improvement efforts within the Tenmile Lakes Watershed, a National priority lake system. Activities include: Invasive Aquatic Weed Control, wetland acquisition, and, Native Oregon Coastal Coho restoration improvements. All of these actions are scientifically based and locally supported and will improve conditions in this unique system. Funding will immediately create five local jobs on the South Coast of Oregon. Funds will be utilized for planning and construction of water quality improvement projects that will focus on the uniqueness of Tenmile Lakes and surrounding Watershed and nonnative aquatic species.