

COUNTY DIRECTOR ANNUAL EVALUATION

Name: Neil K. McDougald

Title: County Director, Livestock and Natural Resources Farm Advisor

County: Madera

SECTION A.

General Performance and Accomplishments: January 2005 to December 2006

I. Statement of assignment

ANR Issue	Knowledge Area	% FTE
Sustainable Use of Natural Resources	Management of Rangeland Resources	75
Cooperative Extension Administration County Director	Personnel & Budget Administration	25

II. Research and Extending Knowledge

As a livestock and Natural Resources Advisor, my goals have been to develop and deliver research-based information on sound management and sustainability of natural resources and livestock enterprises. My program emphasis has been directed toward rangeland management, livestock supplementation, water quality, oak woodland conservation, wildfire and land use.

My goals as County Director are to maintain and enhance an effective facility for Cooperative Extension, to acquire adequate funding to support our programs and activities, and to provide guidance and support to employees to insure they are successful.

Rangeland Water Quality

Duration: 2004 to 2008

Reducing non-point source (NPS) pollution of California's streams and rivers by pathogens, nutrients and organic carbon from beef cattle grazing is a challenge for ranchers throughout the foothills of the southern Sierra Nevada. Both perennial and ephemeral streams draining this region of California can carry large amounts of NPS pollutants such as bacteria and other pathogens, particularly during winter rainstorms when fecal material from cattle may inadvertently be washed into surface water sources and transported downstream to the San Joaquin and Fresno Rivers. Successfully reducing this pollutant load remains technically difficult. Vegetated buffer strips (VBS) are being advocated by such agencies as the U.S. Environmental Protection Agency, Natural Resource Conservation Districts, California Regional Water Quality Control Boards and the State Water Resources Control Board as a core strategy for reducing water quality impact from cattle grazing. This project is evaluating the effectiveness of VBS. Future impacts from this project will be having a science-based foundation for grazing management practices that reduce NPS from

rangelands. The project will result in development of extension educational material for livestock producers and rangeland owners.

Determining the effects of livestock grazing on Yosemite Toads and their habitat

Duration: 2004 to 2008

The US Forest Service implemented restrictions on livestock grazing on National Forests in an effort to prevent impacts to Yosemite toad populations. These restrictions place a burden on livestock operators, in some cases making it impossible to graze areas with toad populations. Although declines in toad populations have been observed, causes have not been clearly identified. The impacts from livestock grazing, if any, and their relationship to toad population survival and persistence are undetermined. This study will provide science-based information to land managers who are faced with decisions regarding livestock use of mountain meadows on public land by determining the best livestock grazing strategy to avoid or minimize impacts on toad populations. The overall objective of this study is to understand the effects of livestock grazing management approaches on Yosemite toad populations and habitats. Future impacts of this project will be having the science base to develop grazing management programs that will protect Yosemite toad populations, rather than ineffective programs based only on perceptions.

Rapid assessment of livestock carrying capacity on hardwood rangeland

Duration: 2005 to 2006

It is not uncommon for livestock producers on California rangelands to move or expand their operations to new areas. In addition, landowners (private, municipal, etc) are increasingly examining the potential for introducing livestock grazing or are evaluating current livestock grazing on their land. Decisions on livestock carrying capacities are commonly founded on general rules-of-thumb estimates. To ensure sustainable management, a process is needed for accurate and rapid assessment of livestock carrying capacity. In a previous project, a process utilizing aerial photography, digitized map layers and relationships among environmental factors, forage production and livestock carrying capacities applicable to large areas (county-wide) were developed. This project provides the first test of this approach on an individual ranch basis. The impact of this process will be to provide a rapid means of assessing livestock carrying capacity applicable to the needs of individual producers. This will result in savings of time, labor and money while providing an accurate carrying capacity assessment necessary for sound rangeland management.

Herbaceous productivity and residual dry matter disappearance on hardwood rangeland

Duration: 1978 to present

Fluctuations in herbaceous production on hardwood rangeland can be extreme. Knowledge of these fluctuations is extremely important in designing livestock grazing and wildlife management programs on a yearly basis to leave the appropriate amount of residual dry matter in the fall. This provides soil protection and a favorable microenvironment for seedling establishment and growth, protects water quality and enhances species diversity. Missing from residual dry matter information was an estimate of how quickly the standing crop breaks down over the summer period into the fall in the absence of livestock grazing.

This information is essential to forage management in meeting guidelines for adequate residual dry matter. This project's impact is utilization of information by livestock producers and agencies to optimize the match between the forage resource and livestock consumption, resulting in the proper amounts of residual dry matter being left in the fall each year. This results in improved water quality by providing an adequate amount of soil protection to minimize erosion and improves forage production and species diversity the subsequent year. In addition, information generated has been utilized by the USDA Farm Services Agency to justify inclusion of counties in Agricultural Assistance Programs due to drought effect on forage production.

Oak woodland canopy change detection and determination

Duration: 1996 to present

Changes in the canopy of oak woodland can provide counties and agencies with valuable information regarding landscape level assessments of oak woodlands, including the critical issue of increasing fragmentation of oak woodland habitat. The USDA Forest Service and California Department of Forestry and Fire Protection initiated a monitoring protocol to assess oak woodland health. This is being done by detecting changes in canopy cover over a five year period using remote sensing approaches. The objectives of this project are to provide information for future modifications in policy approaches and the design of public education programs. An important impact is that local governments now have a research-based tool to assess local ordinances, guidelines and general plan elements as to their effectiveness in sustaining oak woodland. This project has great promise for significant impacts in the near future, as the timing of this assessment corresponds to the time in which many counties are developing ordinances and rules.

Professional Competence and Activity

Professional Certification

Certified Rangeland Manager, California-Pacific Section, Society for Range Management, 1994.

Certified Rangeland Manager, No.7, Board of Forestry, State of California, 1995.

Certified Professional in Rangeland Management, No.CP99-13, Society for Range Management, 1999.

Technical Service Provider (No. 04-3854) Grazing/Forages, USDA, NRCS, California, 2004.

Professional Membership

Life Member, Society for Range Management

California Cattlemen's Association

California Farm Bureau Federation

California Association of Resource Conservation Districts

Professional Committees

Range Management Advisory Committee to the State of California Board of Forestry, 1994-present.

UCCE Liaison, California Farm Bureau Federation Public Lands Advisory Committee, 1992-present.

Madera County Board of Supervisors Fish & Game Trust Fund Committee, 1988-present.

Professional Activity

Peer Reviewer, Journal of Ecology and Range Management, 2000-present.

Chair, Hardwood Sub Committee, Range Management Advisory Committee to The California Board of Forestry, 2001-present.

Technical Advisor, Range Improvement Committee, California Cattlemen's Association, 1981 to present.

Mentor, Kelly R. Smith, MS Oregon State University, Department of Rangeland Resources, Corvallis, Oregon, 2005 to 2006.

Professional Development and Continuing Education

March 14, 2006. Natural Resources Coordinating Conference, Berkeley, CA.

July 7, 2006. Central Valley Region County Director Orientation, Madera, CA.

September 18-19, 2006. 2nd Animal Agriculture Coordinating Conference, Davis, CA.

October 9-12, 2006, 6th California Oak Symposium, Rohnert Park, CA.

November 14, 2006, Danris-X Training, Parlier, CA.

November 22, 2006, University of California Ethics Briefing, Madera, CA.

December 11-13, 2006. Rangeland Watershed Program Workgroup, Davis, CA.

III. University and Public Service

University Service

Research Advisory Committee (RAC) for the UC Sierra Foothill Research and Extension Center, 2003-2008.

UC DANR Ad Hoc Committee, Chair.

UC DANR Special Ad Hoc Committee, Chair

Public Service

Madera County Farm Bureau Federation, Director, 2006-present.

Madera County Cattlemen’s Association, Director, 1996-present.

Fresno/Kings County Cattlemen’s Association, ex-officio Director, 1996-present.

Coarsegold Resource Conservation District, Director, 1995-present.

Eastern Madera County Fire Safe Council, Director, 2005-present.

Madera County Historical Society, Life Member 1995-present.

Madera County Ag Boosters, Charter Member, 1985-present.

Sierra Resource Conservation District, Technical Advisor, 1996-present.

IV. Affirmative Action

Agriculture/Natural Resources

Owners/Operators/Managers of Livestock and Rangeland - Madera & Fresno

Description	White	Black	American Indian	Hispanic	Asian	Male	Female	Total	Source
Neil McDougald	1970	8	122	29	7	1388	748	2136	OTHR
Actual Total	1970	8	122	29	7	1388	748	2136	Individual
Actual Percentage	92.23%	0.37%	5.71%	1.36%	0.33%	64.98%	35.02%	100.00%	Ag Census, land management agency data, Certified Rangeland Manager list, commodity group data
Potential	11636	54	606	176	33	8754	3751	12505	
Potential Percentage	93.05%	0.43%	4.85%	1.41%	0.26%	70.00%	30.00%	100.00%	
Parity Range	74.44%	0.35%	3.88%	1.13%	0.21%	56.00%	24.00%	80.00%	
From:	111.66%	0.52%	5.82%	1.69%	0.32%	84.00%	36.00%	120.00%	

V. Grant Summary List

Title	Collaborators	Funding Source	Duration	Amount
Rangeland Vegetative Buffer Strips	E.R. Atwill K.W. Tate D.M. Dudley	Proposition 13 nonpoint source pollution control. CAFFED grant program	2004 to 2008	\$341,763.00
Determining the effects of livestock grazing on Yosemite Toads and their habitat	B. Allen-Diaz K.W. Tate W.E. Frost Amy Lind	USDA Forest Service	2004 to 2008	\$143,261.00
Rapid assessment of livestock carrying capacity on hardwood rangeland	W.E. Frost J.W. Bartolomne N.M. Kelley R.B. Standiford	Redington Ranch, LLC.	2005 to 2006	\$12,700.00

VII. Bibliography

Peer-Reviewed

50. George, M.R., S. Barry, S.R. Larson, **N.K. McDougald**, T.A. Ward, J.M. Harper, D.M. Dudley R.S. Ingram and E. Laca. 2006. Comparison of comparative yield and stubble height for estimating herbage standing crop in annual rangelands. *J. Ecology and Range Management*, 59(4). (*I cooperated in designing the study, site location, data collection and manuscript review.*)
51. Phillips, R.L., E.R. Atwill, **N.K. McDougald** and J. Nunez. 2006. Submitted. Blue oak (*Quercus douglasii*) recruitment and seedling growth in the Southern Sierra Nevada foothills of California. *J. Ecology and Range Management*. (*I cooperated in designing the study, site location, data collection, manuscript preparation and review.*)
52. Phillips, R.L., **N.K. McDougald**, E.R. Atwill and D. McCreary. 2006. Exclosure size affects young blue oak seedling growth. *California Agriculture* 61 (1): 16-19. (*I cooperated in designing the study, site location, data collection, manuscript preparation and review.*)
53. Phillips, R.L., **N.K. McDougald**, D. McCreary E.R. Atwill. 2006. Blue oak seedling age influences growth mortality. *California Agriculture* 61 (1) 11-15. (*I cooperated in designing the study, site location, data collection and manuscript review.*)
54. Smith, K.R., D.E. Johnson, G.D. Ganskopp, **N.K. McDougald**, N.R. Harris, D.C. Cao and M.R. George. 2006. Submitted. The influence of temperature on cattle distribution. *J. Ecology and Range Management*. (*I cooperated in designing the study, site location, data collection and manuscript review.*)

Abstracts

152. **McDougald, N.K.**, D.M. Dudley, L.C. Forero, W.E. Frost, R.S. Ingram, J.L. Sullins, M.J. Connor and M.R. George. 2006. State and transition models for California's Sierra Nevada foothill oak-woodlands. 59th Annual Meeting, Society for Range Management, Vancouver, British Columbia. #125. (*I cooperated in developing the study, data collection, manuscript development and review.*)
153. Smith, K.R., **N.K. McDougald**, D.C. Cao, N.R. Harris, M.R. George and D.E. Johnson. 2006. Cattle range site preference on a California foothill rangeland. 59th Annual Meeting, Society for Range Management, Vancouver, British Columbia. #340. (*I cooperated in developing the study, data collection and manuscript review.*)
154. Smith, K.R., M.R. G.D. Ganskopp, **N.K. McDougald**, D.C. Cao and N.R. Harris. 2006. Effect of seasonal temperature patterns on cattle locations in the foothills of California. 59th Annual Meeting, Society for Range Management, Vancouver, British Columbia. #339. (*I cooperated in developing the study, data collection and manuscript review.*)
155. Harris, N.R., M. Johnson, **N.K. McDougald**, D. Ganskopp, and M.R. George. 2006. Group associations among GPS collared cattle. 59th Annual Meeting, Society for

- Range Management, Vancouver, British Columbia. #154. (*I cooperated in developing the study, data collection and manuscript review.*)
156. McIlroy, S., B. Allen-Diaz, W.E. Frost, **N.K. McDougald**, L. Roche and K.W. Tate. 2006. Identifying ecosystem impacts of different grazing regimes in the Sierra Nevada. 59th Annual Meeting, Society for Range Management, Vancouver, British Columbia. #243. (*I cooperated in developing the study, data collection and manuscript review.*)
157. E. R. Atwill, K.W. Tate, T. Harter, M.C.G. Pereira, L. Hou and **N.K. McDougald**. 2006. Efficacy of vegetated buffers for reducing waterborne pathogens. USDA-CSREES National Water Conference, San Antonio, Texas. (*I cooperated in developing the study, data collection and manuscript review.*)
158. **McDougald, N.K.**, D.M. Dudley, L.C. Forero, W.E. Frost, R.S. Ingram, J.L. Sullins, M.J. Connor and M.R. George. 2006. State and transition models for California's Sierra Nevada foothill oak-woodlands. Sixth California Oak Symposium, Rohnert Park, CA. #2. (*I cooperated in developing the study, data collection, manuscript development and review.*)
159. Tate, K.W., T.A. Becchetii, C. Battaglia, **N.K. McDougald**, D.F. Lile, H.A. George, and D.L. Lancaster. 2006. Accepted. Macroinvertebrate analysis indicates significant improvement of meadow stream health due to livestock distribution efforts. 60th Annual Meeting, Society for Range Management, Reno/Sparks, Nevada. (*I cooperated in developing the study, data collection, manuscript development and review.*)

VIII. County Director Accomplishments

Staff Supervision

Academics: (3.0 FTE) Neil McDougald, County Director, Livestock and Natural Resources Advisor; Brent Holtz, Pomology Advisor; Joe Camarillo, 4-H Youth Development Advisor, 4-H State Leadership (Fairs and Livestock Programs).

Cross-County support is provided by Jerry Higginbotham, Dairy and Silage Farm Advisor (Fresno County); Scott Stoddard, Vegetable and Limited Resource Farm Advisor (Merced County); Steve Vasquez, Viticulture Farm Advisor (Fresno County).

County Funded Staff: (2.0 FTE) Nancy Jones, Administrative Assistant & Master Gardner Program Representative; Nan Kuret, Program Assistant I.

University Staff: (3.0 FTE) Tome Martin-Duvall, Staff Research Assistant II; Cliff Kirkland, Lab Assistant II; Wayne "Joshua" Steel, Student Assistant II; Sara R. Windgate, Student Assistant II; Dee M. Haane, Laboratory Helper.

During this review period, an ANR approved Area Air Quality Advisor position covering Fresno, Kings, Madera and Fresno Counties is also in the process of being filled. The ANR approved Agronomic Crops and Weed Advisor position is in the process of being filled. A 4-H Program Representative II position is being created and a proposed Viticulture Advisor position is being considered for the future.

Reorganization, mentoring and training of office support staff has enhanced both the quality and quantity of Cooperative Extension (CE) programs. The impact of these changes is reflected in the Master Gardner and 4-H programs. All staff are aware of and follow appropriate university and county policies and procedures.

Staff Development and Training

Staff development to improve office unity, job efficiency, production, performance and job satisfaction is an ongoing process. Enabling, supporting and enhancing staff to perform their duties as efficiently and effectively as possible is the responsibility of the County Director. Evaluations are conducted annually for advisors and staff. Support and input on advisors' programs for merit and promotion salary action is provided at appropriate periods of review. Clerical staff attend trainings on software applications, county processes and customer service. Academic staff attend professional development activities appropriate for their disciplines and programs. The greatest impact is in customer service. It is excellent. Training and organization have led to more effective use of space, resources and time.

Facility Development and Management

Maintaining adequate facilities for Cooperative Extension programs is an ongoing issue for county directors. We are housed in a historic facility at the Madera County Agricultural Center, sharing a building with the County Agriculture Commissioner. An older facility requires consistent cooperation and effort with the county to be maintained and avoid costly replacement. Facility safety is the highest priority, with fire safety being of critical concern. A new telephone system was installed during this period which has resulted in faster and better service to clientele.

Budget

The current fiscal year budget was developed by Ron Vargas, emeritus. This budget has been followed in a fiscally responsible manner with few adjustments. Fiscal year 2007/2008 budget will be developed and submitted in the near future. The budget has historically remained stable and is expected to remain stable.

Public Relations

Creating, enhancing and fostering strong support for our programs through public relations is critical for CE program delivery. Maintaining open and informed communications with county government is essential to ensure the continued flow of resources. With increased size of government, it is increasingly important to work with staff of both the County Administrative Officers and Board of Supervisors. Outside of county government, it is important for the public and other entities to be knowledgeable about the programs and opportunities provided by CE.

All staff are encouraged to develop appropriate public and agency relations. County staff provide excellent customer service, often the first and only contact the public has with our office. Positive relationships are maintained with the chamber of Commerce, community groups, county government, Board of Supervisors, Agricultural Commissioner, Resource

Department, Farm Bureau, Cattlemen's Association, Resource Conservation Districts and high school agricultural departments.

The efforts and programs of the Madera staff result in a better standard of living for county residents by enhancing income from sustainable agricultural productivity, a better quality of life for residences through conservation of natural resources and a bright future by developing capable and responsible young people through the 4-H program.

Section B. General Goals and Self-Assessment

County Director Review:

Self-assessment of program

I conduct and deliver a Full Title VIII program which is well-balanced in research and education programs. I continue to address high priority issues identified by PPAC and our core issues. During this period of review, I assumed the responsibility of Madera County Director. I support and enhance the efforts of existing staff, work to bring new staff into the county and create needed new positions.

Barriers

None.

Goals for coming year: January 2007 – December 2007

- Continue and expand established research and education programs.
- Participate in collaborative publication of research.
- Continue to look for new ways to work on priority issues.
- Continue to work on establishing an MOU between the University of California, California State University, Fresno and the US Forest Service in management of the San Joaquin Experimental Range.

Relationships

I believe my relationship with clientele, coworkers, collaborators, specialists and faculty is excellent. My positive relationship with clientele increases their acceptance of changes indicated by the availability of new science-based information. The quality of my educational program reflects the close working relationship I have with, coworkers, collaborators and specialists. I believe my relationship with faculty, both within and outside the University, is essential to my program success and service to the people of California.

Accountability

Ethical behavior is our first core issue. I support ethical behavior and encourage others to do the same. Credible science-based information is critical to CE success and the development of such information is tied to individual integrity.