Areas/ Goals

**Program Administration**

- **Goal:** Establish administrative infrastructure required to implement SB 27, considering a two year implementation period and maximizing the use of existing private, academic, federal, and state infrastructure (2016 and 2017 Goal).

**Surveys and Studies**

- **Goal:** Develop and begin to implement an overall strategy for collecting representative information from California's major livestock segments, regions with considerable livestock production, and representative segments of the food production chain to include retrospective trends and impacts of the recently implemented Food and Drug Administration (FDA) rules and the SB 27.
Areas/ Goals

**Stewardship**

- **Goal:** Develop and implement comprehensive antibiotic stewardship guidelines and best management practices (BMP) for approximately three different livestock and poultry species/production types in 2017.

**Regulated Use**

- **Goal:** Ensure that the statutes involving 2018 regulated use of antibiotics are supported as needed via regulations, that those impacted by these new provisions have access to outreach and training, that baseline compliance data gathering is initiated, and that agencies with shared jurisdiction agree on outreach and enforcement cooperative roles and responsibilities.
Area 1:

Program Administration
**Objective 1:** Develop and support State funding proposals including a Budget Change Proposal for fiscal year 2016-2017 workload, and a Budget Change Proposal for additional workload that begins in fiscal year 2017-2018.

- **Performance Measure:** Requested Phase I funds in FY 2016-17 budget with additional phase II funds in FY 2017-18 budget.

- **Accomplishments:**
  - FY 2017-18 was approved and signed into budget.
    - AHFSS: 1 AGPA (outreach development/business support), 2 LI (field), 2 ES (field dairy); ½ RS (to fully fund position); 1 Vet Spec (lead survey and studies program) → All hired
    - IS-Feed: 2 ES positions → 1 Hired
    - Contract funding – ½ for CAHFS and ½ for stewardship/best practice development, including surveys

- **Moving Forward:**
  - Initial efforts by team has better identified magnitude and cost of implementation (more than 30 production types, criticality of reaching practicing veterinarians, cost of studies needed to better understand consequences of changes—such as impact on both animal health and resistance patterns) → Phase III funding will be critical to fully implement survey effort and support compliance with use parameters.
Program Administration

Objective 2: Seek direct federal funding support, or USDA and FDA cooperation if no federal funds can be obtained.

• Performance Measure: FDA/USDA grant or structure for cooperation in place.

• Accomplishments:
  ✓ One UCD study funded with Federal funds (NARMS)
  ✓ Team continued communications with FDA and USDA regarding potential collaboration
  ✓ Continued checking for grant opportunities and collaborations

• Moving Forward:
  • Waiting to hear on status of other academic proposals (likely PIs will have word this fall/ winter)
  • Continue to seek Federal funding and collaboration
**Objective 3:** Recruit, hire, and train program staff in accordance with approved funding.

- **Performance Measure:** Training program developed and documented; All positions filled for FY 2016-17. Begin the recruitment and hiring for FY 2017-18.

- **Accomplishments:**
  - Animal Health Branch statewide meeting- attended by AUS. AUS program was presented to educated AHB staff and outreach materials presented to AHB staff so they might start participating in field activities
  - Attended USAHA meeting to learn more about AMR as well as government/industry interactions
  - Ft Collins, Co (August, 2018) meeting with USDA NAHMS and others - provided training regarding current thinking regarding metrics
  - All FY 2017-2018 AHFSS positions hired or committed (last to report Jan 2018)
  - Participated in MDFSB statewide meet to educate MDFSB regarding AUS issues and to educate AUS about MDFSB so they may start participating in field activities
  - MPES statewide meeting - outreach meeting for distribution was shared so they may start participating in field activities
  - Presentation to LID regional supervisors and key staff was conducted so they may participate in field activities.
  - ISD-updated field staff on the program and initiated the use of a checklist for retailer visits at the Feed, Fertilizer and Livestock Drug statewide staff meeting

- **Moving Forward:**
  - New hires are receiving training through existing staff and through mechanisms used for initial staff
Objective 4: Establish business administrative capability.

• Performance Measure: Listed capabilities are acquired/assigned, assessed and have demonstrated adequate functionality per IS and AHFSS Division Directors review

• Accomplishments:
  ✓ Most tasks completed in earlier quarters
    ✓ New cubicle location for staff handling confidential data secured
    ✓ AGPA is on board and training/working on contract development

• Moving Forward:
  o Addition of F17-18 staff will enhance functionality within the three “units” (regulatory, stewardship, and surveys and studies)
  o Having a secure data area will allow team to go forwards with writing appropriate security SOPS
  o Contracting of research and outreach will be based on priority needs that staff have determined
Objective 5: Develop and implement a communication plan including:

- SB 27/AUS Ad Hoc Stakeholder Advisory Committee
- SB 27/AUS Interagency Committee
- Website
- Annual report
- Regional “town hall” or stakeholder meetings
- Business and professional organization updates

- Performance Measure: Completed plan with listed elements described in sufficient detail to implement; published annual report; stakeholder year end communication satisfaction survey.

- Accomplishments:
  - Draft Strategic plan (2018) to share
  - Communication plan with required elements is completed and continually being amended/modified based on identification of news groups/participants.

- Moving Forward:
  - Adjust plan for 2018 efforts
Area 2:

Surveys and Studies
Surveys and Studies

**Objective 1:** Implement a plan to involve stakeholders and technical experts in Monitoring and Surveillance project development and prioritization.

- **Performance Measure:** Diagram projects and illustrate stakeholder engagement; year-end stakeholder satisfaction survey

- **Accomplishments:**
  - Subject matter experts are currently being consulted for upcoming and ongoing studies
  - Continued participation in a multi-agency/multistate working group to develop metrics and share surveillance concepts. Workshop in Fort Collins with this group was attended by AUS staff.

- **Moving Forward:** Administer year-end satisfaction survey. Continue to work with AMU metrics workgroup.
**Objective 2:** Establish data security policy and capability that ensures information gathered is held confidential and will not be disclosed to any person or government agency unless the data are aggregated to prevent the identification of an individual farm or business (FAC 14407), including memorandums of understanding or data sharing agreements with cooperators.

- **Performance Measure:** Policy and detailed standard operating procedures approved by CDFA legal; sample MOU/data sharing agreement approved by legal.

- **Accomplishments:**
  - First draft SOPs developed.
  - Conference call with NAHMS to get their advice on how we could improve our SOPs

- **Moving Forward:** Continue to refine SOPs.
Surveys and Studies

**Objective 3:** Establish data security policy procedures to assure that information shared by participating agencies is protected per their requirements and per FAC 14407.

- **Performance Measure:** Policy and detailed standard operating procedures to protect information provided by other agencies are reviewed and approved by CDFA and sharing agency’s legal counsel.

- **Accomplishments:**
  - First draft SOPs developed.
  - Conference call with NAHMS to get their advice on how we could improve our SOPs

- **Moving Forward:** Continue to refine SOPs.
**Objective 4:** Ensure the California Animal Health and Food Safety Laboratory System procures equipment and hires and/or trains staff necessary to support resistance pattern studies

- **Performance Measure:** Equipment in place, laboratory protocol review complete and testing method competency demonstrated and documented
- **Accomplishments:**
  - CAHFS lab equipment and procedures for increased AUS-related work load is up and running.
  - AUS staff toured the CAHFS lab in October to demo equipment and discuss new capacities for AMR testing/reporting with MICs
- **Moving Forward:** CAHFS lab will be engaged in surveillance efforts to process samples for antimicrobial resistance monitoring.
**Objective 5**: Conduct a literature review to analyze reports and data related to antibiotic use and resistance monitoring, which will include published studies that can provide insight into surveillance/monitoring study design.

- **Performance Measure**: Summary report that includes recommendations for study design.
- **Accomplishments**:
  - Literature review continues. Relevant sources have been identified and consolidated.
  - Report outline created.
  - Report generation has begun.
- **Moving Forward**: Summary report will be completed by year’s end.
**Objective 6:** Evaluate availability and quality of baseline data from existing sources.

*Performance Measure:* List sources of potential relevant baseline data; data gathering initiated and documented. Summary report that includes gap analysis related to data quality, geographic distribution and production type.

- **Accomplishments:**
  - Cow-calf survey developed and distributed state-wide via mail.
  - Private veterinarians survey developed and distributed state-wide through CVMA. Other avenues of distribution are currently being explored.
  - Gap analysis report has been outlined and development has begun.

- **Moving Forward:** Data will be analyzed and summary information will be generated. Gap analysis summary report will be completed by year’s end.
Objective 7: Develop and initiate or participate in studies intended to gather farm or other relevant data.

- **Performance Measure:** Three studies described and initiated.

- **Accomplishments:**
  - Data from contracted VMTRC dairy study has been collected and analysis has begun.
  - Cow-calf survey developed and distributed state-wide via mail.
  - CA poultry study underway. Contract negotiations with research institution in progress.
  - Private veterinarians survey developed and distributed state-wide through CVMA.

- **Moving Forward:** Developing a CA sheep survey with input from experts. Exploring other contract studies.
**Objective 8:** Complete information sharing plan that will provide producers, veterinarians, and other stakeholders with updates on antibiotic sales and use findings and other disease management practices and health outcomes.

- **Performance Measure:** Documented information sharing plan; year-end stakeholder survey.

- **Accomplishments:**
  - All surveys that are currently distributed include questions regarding the best way to share information with producers and veterinarians.
  - Information will be incorporated into stewardship guidelines.

- **Moving Forward:** Administer stakeholder year-end satisfaction survey.
Area 3:
Stewardship
Objective 1: Establish and implement an organized process for evaluating and approving suggested BMPs, including stakeholder review, evaluation of top production types and prioritization for BMP development.

- Performance Measure: List of potential California species or production types requiring unique guidelines listed in priority order for development.
- Accomplishments:
  - Developed Species Prioritization Methods.
  - Surveys will gather information to direct BMP development.
- Moving Forward:
  - Production type specific work group being developed for development of BMP guidance following survey analysis.
Objective 2: Conduct extensive literature review for alternative treatment, sanitation, vaccination, and other preventive methods, and implement a process for evaluating and reporting findings.

- **Performance Measure:** Summary report and analysis of existing literature.
- **Accomplishments:**
  - Literature Database Completed June 29
- **Moving Forward:**
  - Use Gap analysis in conjunction with species-specific workgroups and surveillance studies to evaluate which areas need alternatives most severely.
  - Continue to contribute to database through regular independent literature searches.
Objective 3: Review existing stewardship guidance used for developing antimicrobial stewardship programs in California hospitals and other entities in California public health where stewardship is practiced.

- **Performance Measure:** Report on BMPs and other guidance used in human stewardship programs that can be adapted to animal stewardship programs.

- **Accomplishments:**
  - Ongoing collaborations with Dr. Epson and Dr. Starr from CDPH

- **Moving Forward:**
  - Initiated conversations with CDC and Minnesota Department of Health; warrant future collaborations
**Objective 4:** Develop core recommendations and components of BMPs that apply across all species/production types.

- **Performance Measure:** Model BMP structure that includes common elements.
- **Accomplishments:**
  - Beef Quality Assurance Collaborative Meeting, July 17
  - Expert Work Group: continuing review of program, this meeting focused on the role of Quality Assurance programs as well as judicious use, July 19
  - Expert Work Group: veterinarian resources, VCPR models – feedback, judicious use principles, October 4

- **Moving Forward:**
  - Next Working Group meetings to take place in the New Year.
  - Publish core recommendations (Judicious Use Principles) and distribute to veterinarians and livestock producers.
**Stewardship**

**Objective 5:** Address the Veterinary Shortage: Conduct regional listening sessions to create protocol for providing timely and economical treatment and care of animals in remote areas where the number of veterinarians is limited.

- **Performance Measure:** Identification and characterization of California regions with limited access to appropriate veterinary service and/or antimicrobials; Summary report and recommendations from two regions (others in 2018).

- **Accomplishments:**
  - Continued mapping of veterinarians in the area to determine actual factors in determining veterinary coverage density
    - Includes cleaning of base information and GIS plotting
  - Visited Redding to speak with livestock inspectors and veterinarians to identify local challenges, July 13
  - Veterinary Collaborative meeting to discuss specific messages to vets and for vets to educate producers, August 14
  - Vet-to-Vet Meetings spread across the state to discuss upcoming changes with veterinarians and how they can best be prepared (3 meetings, November 14-16)

- **Moving Forward:**
  - Host meetings for livestock producers and local veterinarians in the identified regions with limited access to veterinary care to consult on establishing a VCPR.
Objective 6: Three production type specific, scientifically validated BMPs intended to reduce the reliance on medically important antimicrobials while supporting good animal health outcomes on economically viable farms and ranches.

- **Performance Measure:** *Three guidance documents describing BMPs for a specific species/production type that is supported by a technical working group as described.*

- **Accomplishments:**
  - Identified core content structure of BMP guidance for livestock producers and veterinarians.
  - Developed process for data review and development of BMP guidance.

- **Moving Forward:**
  - Production type specific work group being developed for development of BMP guidance following survey analysis.
Objective 7: Begin the planning for outreach and education for BMPs

- **Performance Measure:** Prepare the initial outreach and education BMP plan.
- **Accomplishments:**
  - Utilize existing organizations that have the infrastructure and experience in livestock producer education.
  - Identified point of contact and established communications within existing networks reaching livestock producers and veterinarians.
- **Connections include:**
  - CDFA AHFSS AHB & MDFSB
  - UC Davis VMTRC, VMTH, SVM, CAHFS, FARAD, AES, CE – Ag Advisors, 4-H, Chico State, Cal Poly
  - CVMA, VMB, ADVC
  - NIAA, CFBF, CCA, CBC, Dairy CARES, CWGA, CPPA, CDQAP
  - California Agriculture Teachers Association
  - AHI
- **Moving Forward:**
  - Provide educational materials in person/print/electronic forms for livestock producers and veterinarians through contractors with vast connections and influence in the livestock industries.
  - Provide continuing education events and webinars in collaboration with UC Davis and FARAD for veterinarians on judicious use of antimicrobials in livestock.
  - Provide support for stakeholders after implementation in January (email and phone).
Area 4:

Regulated Use
**Objective 1:** Review existing and new statutes and impacts to current regulatory framework, identifying potential gaps in regulations and promulgate program regulations to clarify statute and allow for streamlined and cohesive program activities.

- **Performance Measure:** 100% of needed regulatory updates identified and adopted before 2018 with supporting comments from coordinating agencies and most impacted parties.

- **Accomplishments:**
  - Received legal clarification regarding the Department’s authority regarding the sale of MIADs
  - Retailers will need to be licensed with Board of Pharmacy (BOP) to sell MIADs

- **Moving Forward:**
  - Will work with BOP to help retailers become licensed
  - Will be sending information by Dec. 1, 2017 to affected retailers
  - Will follow up information sent with visits
Objective 2: Develop material explaining the legal requirements coming into effect in 2018 related to antimicrobial use in livestock.

- Performance Measure: Completed materials as described; effectiveness assessment.
- Accomplishments:
  - Created various outreach documents to explain requirements for producers, retailers, veterinarians, and the general public
  - See folder of sample documents

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Objective 2: Develop material explaining the legal requirements coming into effect in 2018 related to antimicrobial use in livestock.

- Performance Measure: Completed materials as described; effectiveness assessment.
- Accomplishments:
  - ✔ Continuously updating and adding resources to the CDFA website
  - ✔ Maintain Facebook page
- Moving Forward:
  - o Continue to update the website and documents as needed
  - o Create new documents
Objective 3: Deliver outreach and education related to 2018 regulated antimicrobial use.

- **Performance Measure:** 80% penetration of target audience.

- **Accomplishments:**
  - ISD staff have:
    - Visited ~340 retailers to deliver outreach, including licensed and unlicensed firms
    - Continued correspondence with drug distributors and bigger firms who own multiple retail locations

- **Moving Forward:**
  - ISD staff will:
    - Send an email and hard copy to all licensed retailers regarding the BOP license requirement
    - Visit all known firms (licensed and unlicensed) to ensure information has been received
    - Meet with Drug Distributors to provide updates
Objective 3: Deliver outreach and education related to 2018 regulated antimicrobial use.

- **Performance Measure:** 80% penetration of target audience.
- **Accomplishments:**
  - AHFSS staff have:
    - Given 17 presentations to animal health representatives, various producers, and veterinarians
    - California Agriculture Teachers Association (40), CCA (200), CWGA (60), Animal Health International (80), UC Davis LAIM Resident Seminar (20), ADVC (40), Vet-to-Vet meetings in dense animal regions of CA (90), and the NIAA Antibiotics Symposium (120)
    - Attended 8 industry board meetings
    - Provided training to CDFA staff within the Animal Health Branch and the Milk & Dairy Food Safety Branch (160)
    - Published articles in the Animal Health Branch Newsletter (July, October), Dairy Review (Sept), California Veterinarian (July/August), UCCE (Nov), Board of Pharmacy (Dec)
    - Distributed over 2,000 (including in Spanish) physical documents to producers via feed stores, AHB livestock inspectors, CFBF, UCCE, at the Latino Farmers Convention, and directly onto dairy farms via MDFSBL milk inspectors.
    - Started a Facebook page (July 13, 2017) with 95 followers, 90 likes and published 10 posts with a reach of 988 people
    - Website maintained. Over 2,500 views.

- **Moving Forward:**
  - AHFSS staff will:
    - Continue to give presentations, write articles, create multilingual outreach documents, maintain Facebook page, and make additions to the website as resources become available.
**Objective 4:** Gather baseline compliance data from feed mills and feed distributors, veterinarians and livestock and poultry owners/managers relative to the new FDA VFD Rule and antimicrobial label changes that came into effect in 2017.

- **Performance Measure:** Report summarizing the findings in all CDFA licensed feed mills, distributors, and retail stores selling products containing medically important antimicrobials.

- **Accomplishments:**
  - ISD staff have:
    - Visited feed mills, distributors, and retail stores and collected information of who plans to manufacture and/or distribute VFD feed
    - Reviewed VFDs at the feed mills and advised of modifications needed
    - Provided AHFSS with information regarding overall modifications needed on VFDs
    - Working with AHFSS staff to provide information needed

- **Moving Forward:**
  - ISD staff will start inspecting facilities that will be producing or selling VFD feed, advise if changes are needed and share information with AHFSS