

**2015-2016**

**Human-Wildlife Conflict Program  
Year-End Incident Report Summary  
Wildlife Management  
September 1, 2015 – June 30, 2016**



Wildlife Branch - Wildlife Investigations Lab  
California Department of Fish and Wildlife

### Executive Summary

This report summarizes the California Department of Fish and Wildlife's (CDFW) response to the Governor's Emergency Drought Relief Fund, Drought Response Implementation Plan, Category D-4 (Human-Wildlife Conflict). The CDFW anticipated a drastic increase in human-wildlife conflicts statewide due to the forecasted 2015 extreme drought, which was exacerbated by the already dry conditions the three years prior. In response, the CDFW fully utilized the Governor's allocation for responding to human-wildlife conflict incidents by initiating a coordinated statewide response and data collection protocol. This report summarizes the response of CDFW's Wildlife Management staff to human-wildlife conflict incidents reasonably caused by the drought occurring between September 1, 2015 and June 30, 2016, the time period during which data collection and reporting protocols were implemented.

Overall, CDFW Wildlife Management staff expended 7,044 hours in response to 10,526 incidents involving situations of Human-Wildlife Conflict (e.g. Public Safety, Property Damage, Animal Welfare, General Nuisance and Sightings) from September 1, 2015 through June 30, 2016. (10 months) The majority of incidents requiring CDFW response consisted of animal welfare cases and incidents where animals caused property damage, likely in search of anthropogenic food sources. To provide adequate response to these incidents, Department Wildlife Management (WLM) staff expended an allotment of \$450,000.00, yet this amount was insufficient to respond to all incidents of human-wildlife conflict. CDFW staff prioritized responses to situations that could be reasonably caused by the drought and affecting those communities most impacted by the drought. Through these efforts, CDFW leadership has realized the enormity of the Department's HWC response and the need for continued support for this level of service to the public in relation to drought – "the new normal."



Central Region wildlife biologist Tim Kroeker responding to a deer animal welfare incident. The deer was suspected to have been in search of food sources near an irrigated landscape when it got curious and stuck its head into a plastic pumpkin. The deer would have likely expired without Tim's assistance with removing the plastic container.

### Initial Response Coordination

Department leadership initially developed a Drought Response Implementation Plan (DRIP) that prioritized actions for responding to the 2015 unprecedented drought that was pervasive throughout California. These actions called for convening implementation teams that were to deliver specific projects and develop and implement project tracking measures.

Department leadership appointed leads for each DRIP category. The Department's Wildlife Branch – Wildlife Investigations Lab (WIL) was chosen to lead the implementation of the DRIP D-4 Human-Wildlife Conflict category. Staff within the WIL's Human-Wildlife Conflict Program convened a series of coordination meetings with Regional staff to develop and implement a Human-Wildlife Conflict (HWC) incident response tracking protocol. This HWC Coordination Team developed this protocol to enable reporting of standardized measures of HWC incident responses. The protocol organizes HWC incident response types into six generalized categories:

- 1) **Public Safety** - incidents where wildlife has injured a human or CDFW determined that human injury is likely without intervention;
- 2) **Perceived Public Safety** – incidents where the totality of the circumstances indicates a real or perceived threat by the public to human safety or well-being;
- 3) **Property Damage** – incidents where wildlife has caused real damage to personal property;
- 4) **Animal Welfare** – incidents involving orphaned, sick, injured, or displaced wildlife requiring assistance;
- 5) **General Nuisance** – incidents involving wildlife considered by the public to be a nuisance and where no significant property damage has occurred; and
- 6) **Sighting** - Public observations of wildlife not otherwise characterized or requiring a response.

The protocol was developed, tested and fully implemented on September 1, 2015. From that point on, field staff were required to report response actions to Regional HWC Lead Persons bi-weekly. Staff reported the amount of time required to perform general actions in response to these categories. Response was categorized by type of response (phone conversation, email correspondence, in person/in office, or field response) and general actions (public safety response, provide education or advice, capture animal, move to nearest available habitat, issue permit, refer to other staff, internal coordination, respond to media request, investigate mortality, receive/transport animal, provide veterinary care for animal, and other).

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Furthermore, expense tracking sheets were developed to monitor the use of emergency drought relief funds. These sheets quantified staffing resources as well as equipment purchases.

Regional HWC Leads compiled tracking sheets from field staff and submitted regional reports to Headquarters staff at the WIL. WIL staff then reviewed regional reports and drafted bi-weekly reports for CDFW Leadership.



CDFW staff responded to a deer carcass that was cached by a mountain lion in a children's playground. The removal of the carcass ensured the safety of the children by eliminating the lion's food source, thereby deterring the lion from frequenting the area.

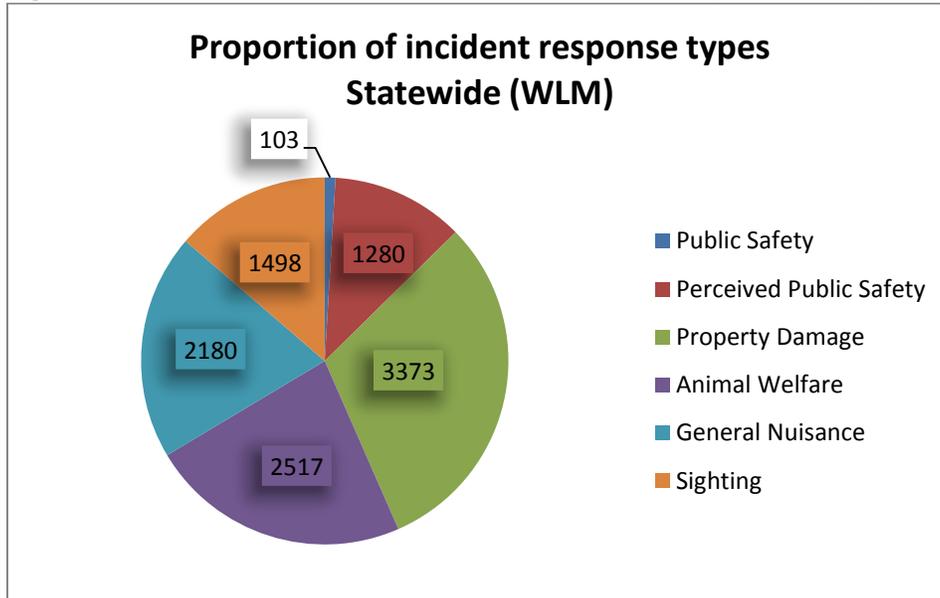


## Statewide Human-Wildlife Conflict Response Overview

The standard metric developed by the data collection protocol is defined as “Incident-Person-Days,” which represents the number of incidents an individual staff person has responded to on one given day. For instance, a call from the public to report an injured animal would be counted as one incident, whereas a field response to a bear in a tree could potentially be represented as several incidents depending on the number of staff involved and the number of days it took to resolve the incident.

In total, CDFW wildlife management staff responded to 10,526 incidents between September 1, 2015 and June 30, 2016 (Figure 1). The majority of incidents requiring CDFW response consisted of animal welfare cases and incidents where animals caused property damage, likely in search of anthropogenic food sources. While no comprehensive pre-drought data exists for human-wildlife conflicts in California, the CDFW concludes that these types of incidents have been exacerbated by the drought, which resulted in a reduction of natural food sources. This, in turn, has likely increased environmental stressors on individual adult and juvenile animals which can either increase prevalence of disease and malnutrition or result in animals searching for food or water sources that may be closely associated with humans.

Figure 1. Statewide Human-Wildlife Conflict Incidents (9/1/2015 - 6/30/2016).



## CDFW Regional Human-Wildlife Conflict Response

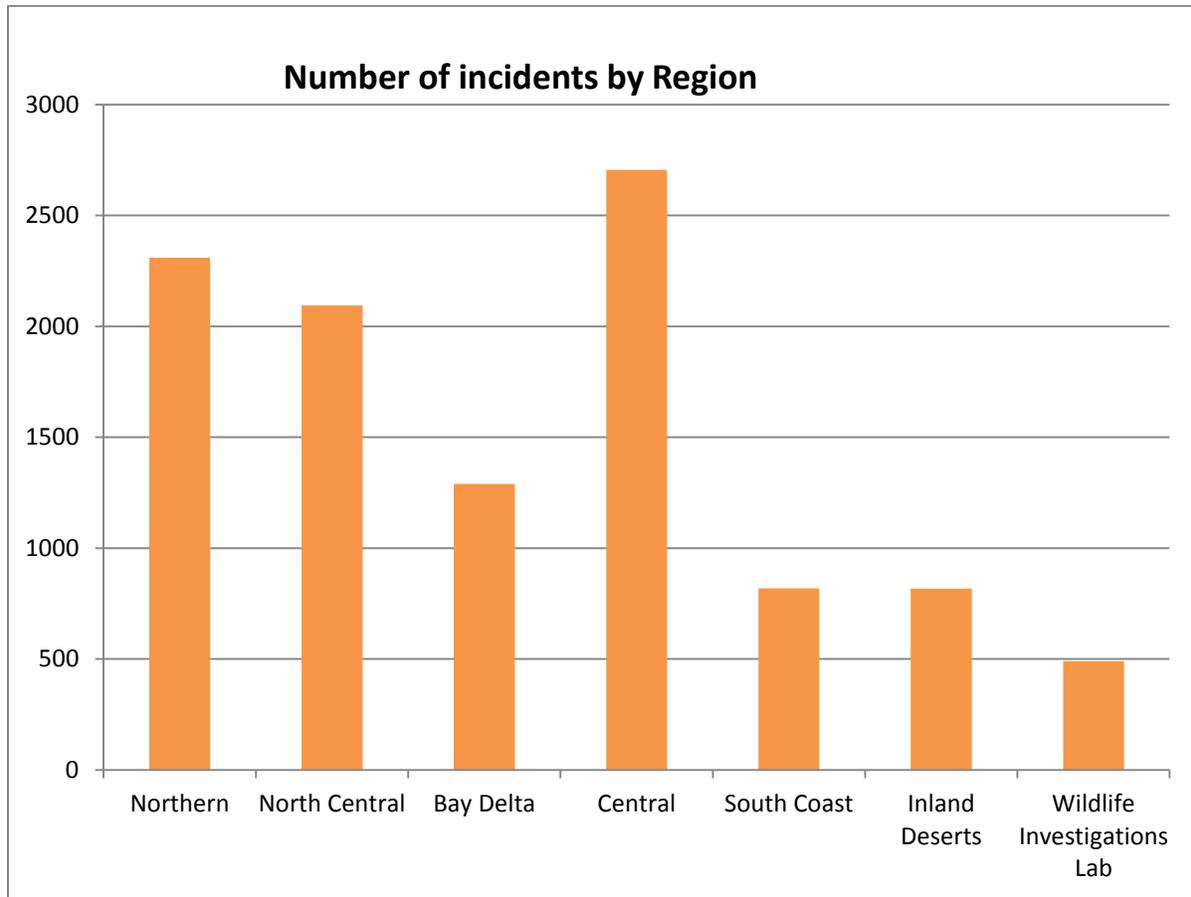
Within CDFW Wildlife Management, the primary HWC response functions include the six terrestrial administrative Regions and the Wildlife Investigations Lab. The administrative Regions are geographically situated throughout the State (Figure 2), and the Wildlife Investigations Lab is located in Rancho Cordova (near Sacramento) yet has statewide responsibility for providing policy direction and coordinating animal welfare and public safety situational response.

Figure 2. CDFW Administrative Regions.



CDFW's Central Region provided response to a majority of HWC incidents (Figure 3). The Central Region geographically coincides with the areas of the state most severely impacted by the drought. According to CDFW's records, the South Coast Region and Inland Desert Region responded to fewer incidents than might be expected. This is partly due to the staffing levels in these Regions. The South Coast Region and Inland Desert Region are both understaffed in their respective Wildlife Management Divisions. These shortfalls have resulted in the CDFW shifting more HWC responsibility to the Law Enforcement Division's Southern Enforcement Division. As a result, the numbers presented here may not accurately reflect the number of incidents that the CDFW has responded to since the Law Enforcement Division will report on their response.

Figure 3. Number of HWC incidents per CDFW Region (9/1/2015 - 6/30/2016).

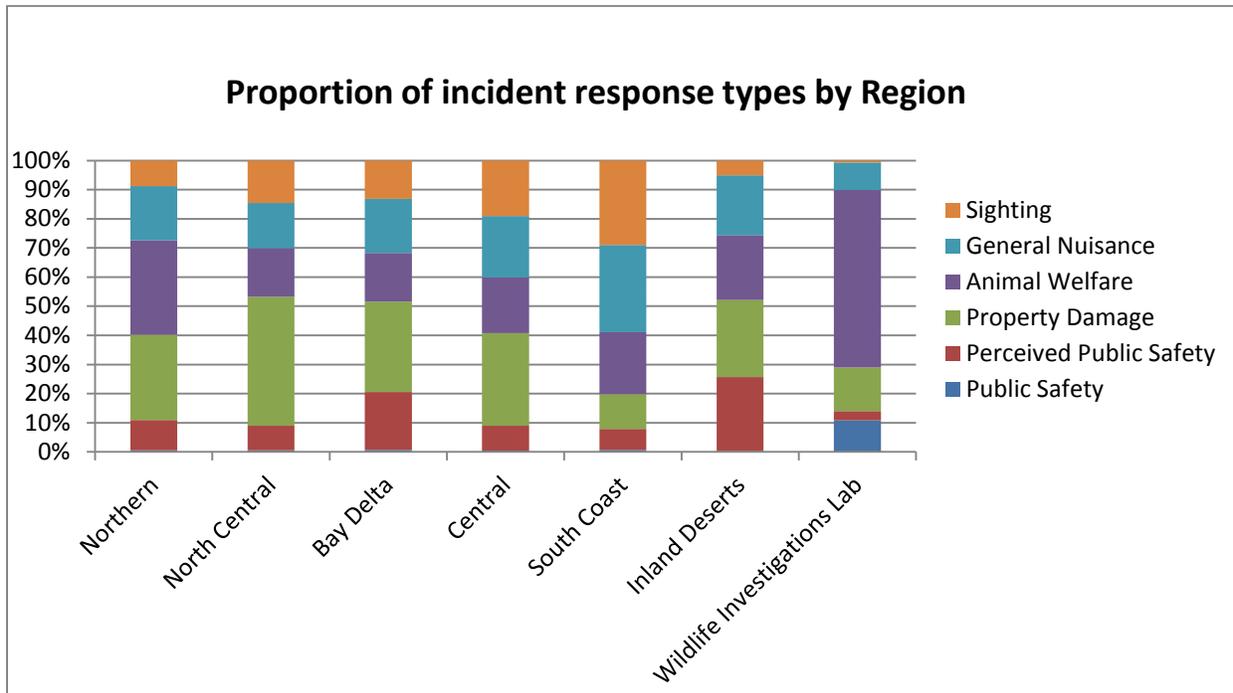


CDFW Regional staff primarily responds to property damage and general nuisance situations, while the WIL responds to an increased proportion of animal welfare and public safety incidents (Figure 4), which is a reflection of these functions' primary roles with regard to HWC response.



Bear damage to a chicken coop. CDFW staff has responded to more property damage incidents than any other type of HWC incident during this reporting period. Property damage by wildlife has been, and continues to be, a substantial source of conflict, particularly in rural communities.

Figure 4. Proportion of incident response types by CDFW Region (9/1/2015 - 6/30/2016).



Although the Central Region responded to more incidents, the Northern Region expended more total time responding to incidents than other Regions (Figure 5). The low-density road network in Northern Counties combined with the sparse human population requires more time for Northern Region staff to respond to incidents in-person. Conversely, the WIL expends more time per incident than other functions within the CDFW (Figure 6). This is likely due to the increased time to provide policy guidance, internal coordination, addressing the media and providing veterinary care required of the WIL relative to the Regions.



CDFW biologist Henry Lomeli places an orphaned bear cub into the artificial den he has created with the assistance of local PG&E staff. Each year, CDFW responds to several orphaned bear cub situations where the cubs would not be able to survive on their own. After a determination that the cubs are good candidates for rehabilitation and release, the cubs are captured and cared for until they are strong enough to survive without their mother.

Figure 5. Estimated time spent on all HWC incidents by CDFW Region (9/1/2015 - 6/30/2016).

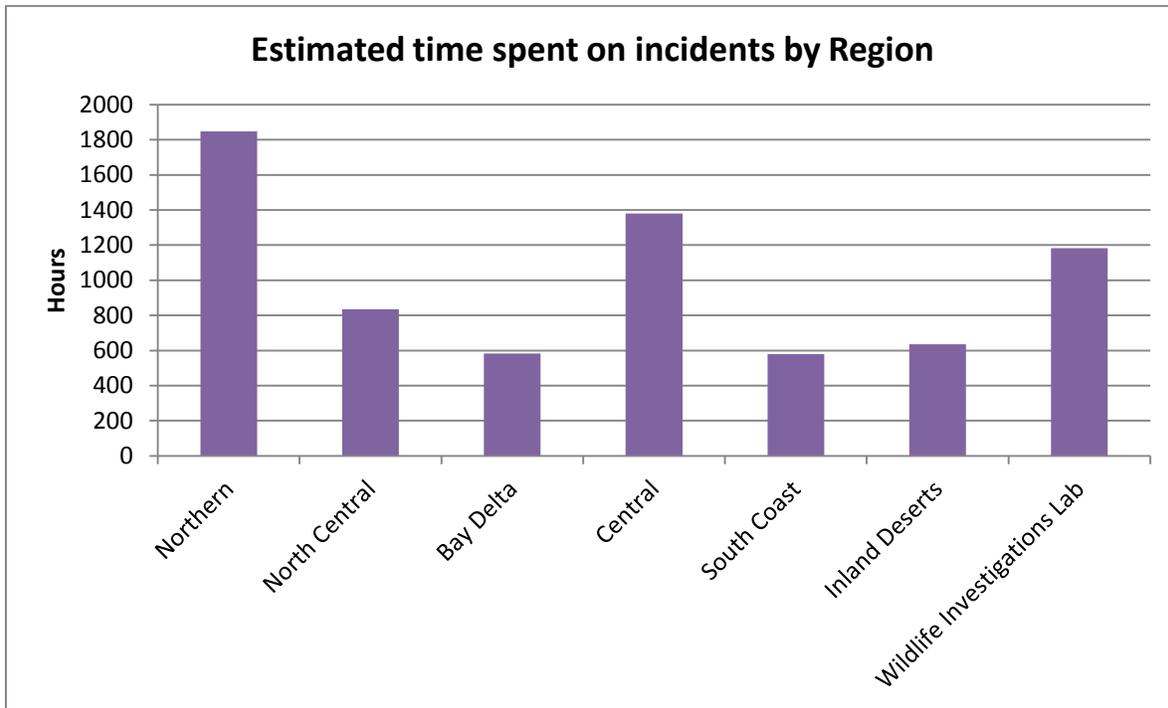
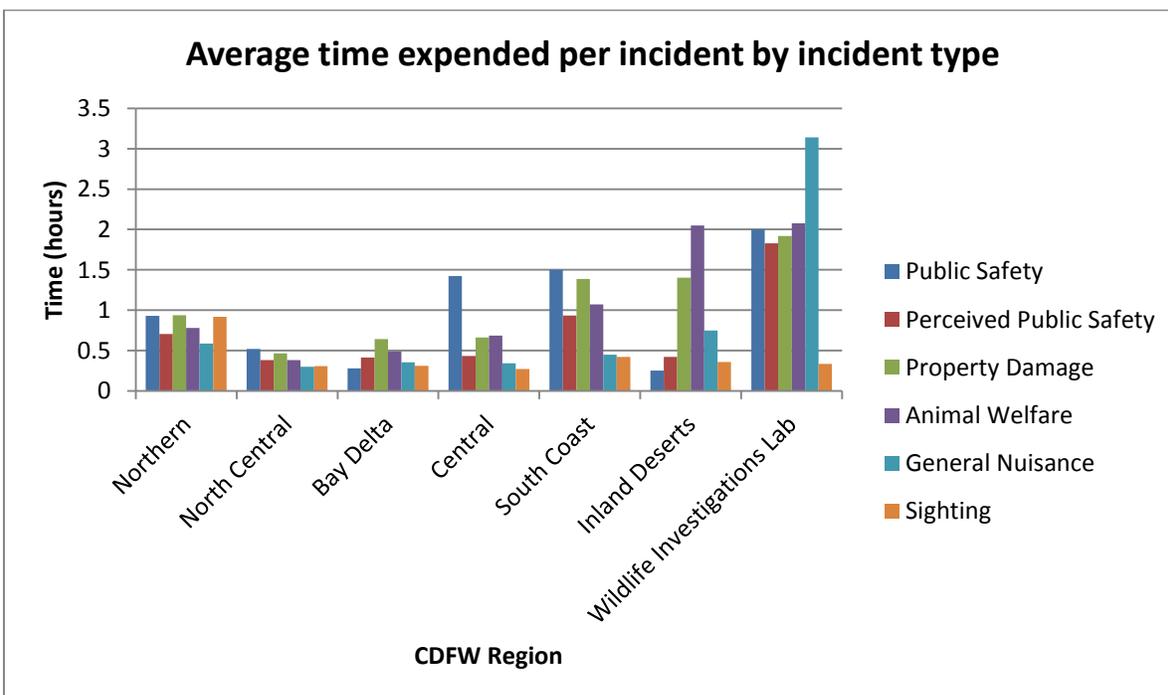


Figure 6. Average time expended per incident by incident type (9/1/2015 - 6/30/2016).



### Species-level Human-Wildlife Conflict Response

The CDFW primarily responds to HWC incidents involving black bear, mountain lion and deer, followed closely by coyote and wild pig (Figure 7). Moreover, incidents involving black bear, mountain lion and deer require the majority of time spent responding to HWC incidents (Figure 8). While the CDFW occasionally responds to conflict issues involving urban wildlife (e.g. raccoons, bats, opossum, etc.), such incidents are primarily addressed by licensed private pest control operators, and CDFW notification is not required. Since no data collection standards exist for pest control operators, we are unable to estimate the total extent of these HWC incidents' impacts to the State's constituents.

Figure 7. Top 10 species responsible for Human-Wildlife Conflicts (9/1/2015 - 6/30/2016).

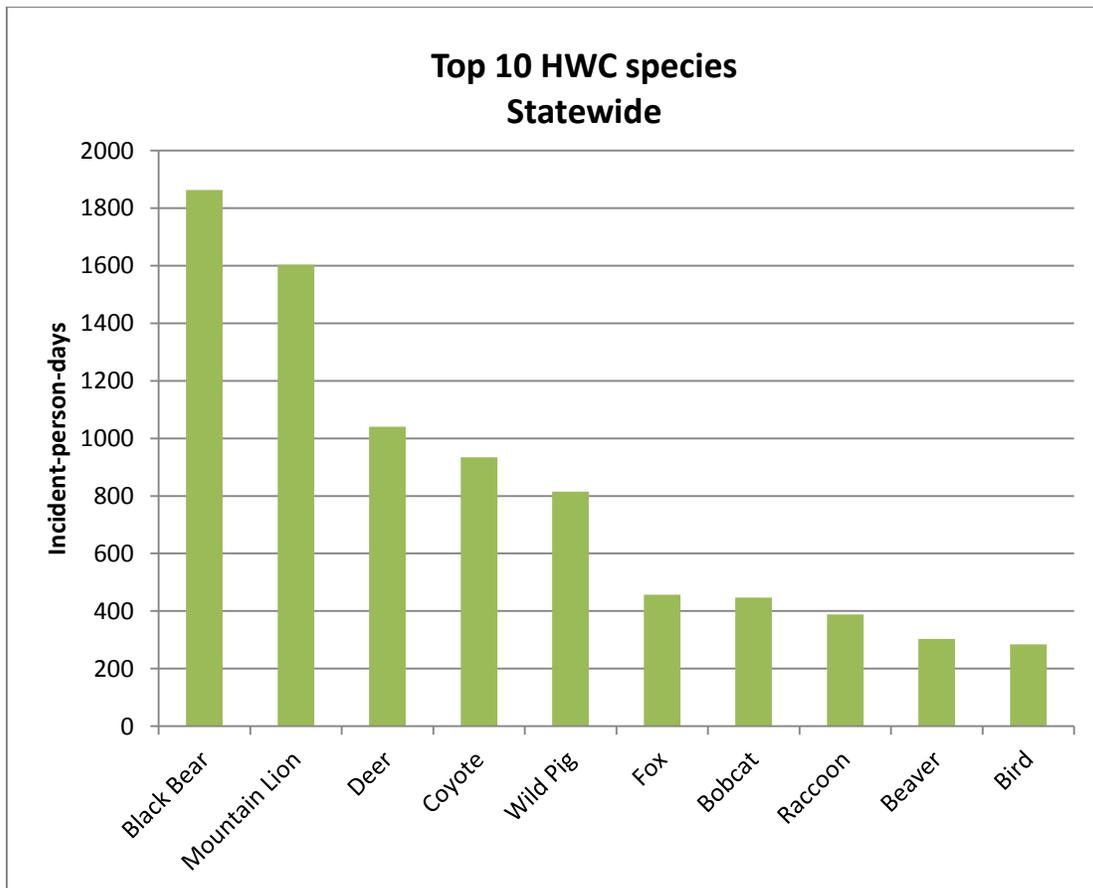
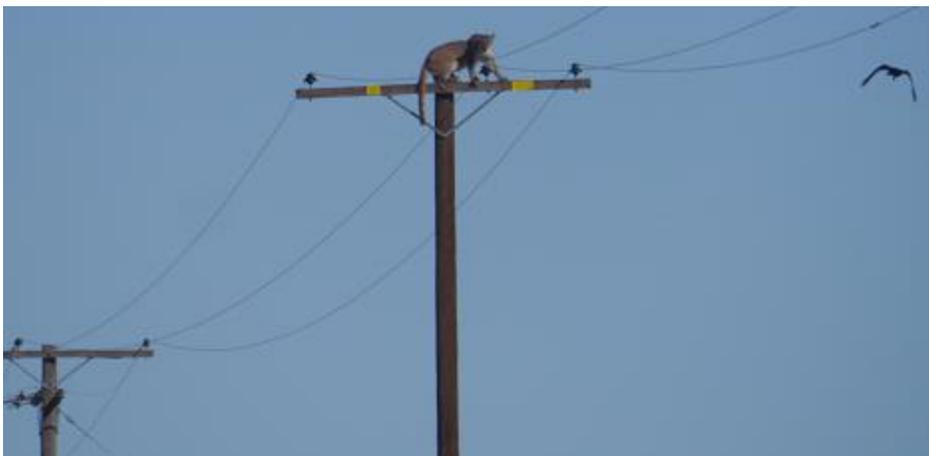
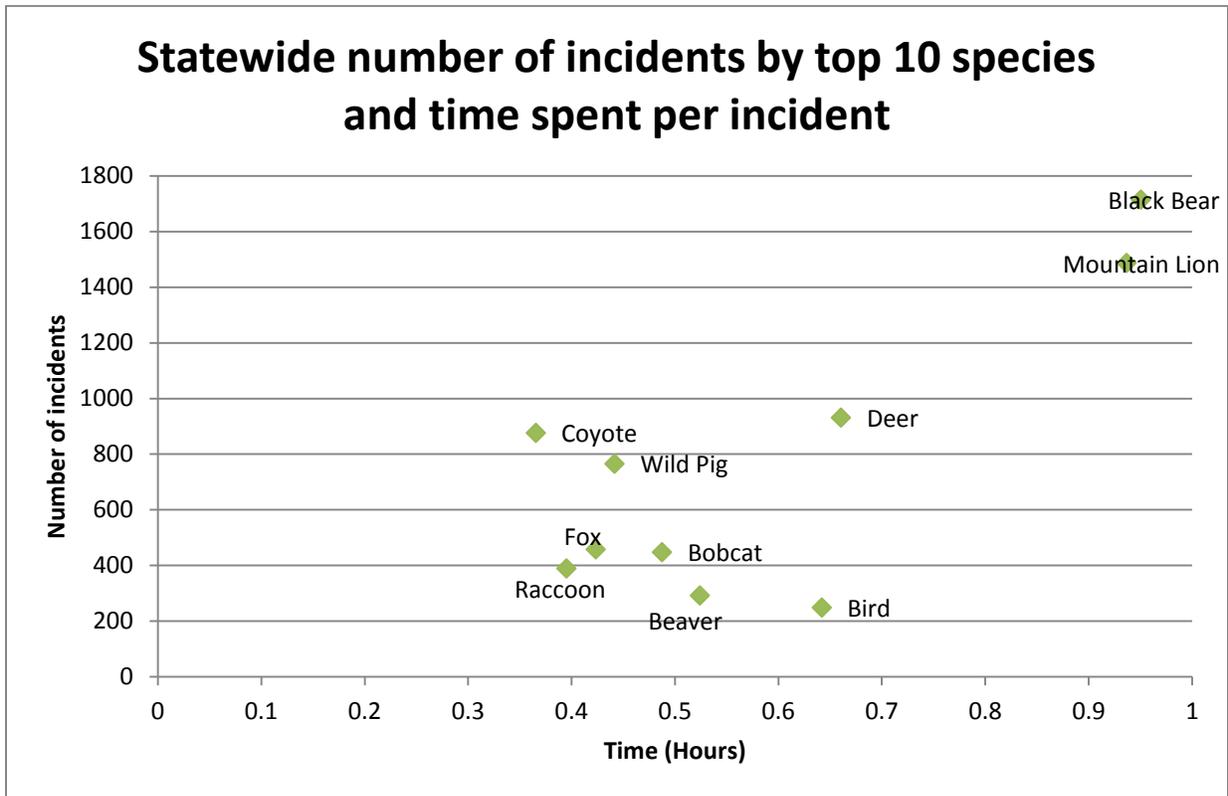


Figure 8. Top 10 species with highest incident rate and time spent Statewide (9/1/2015 - 6/30/2016).



This mountain lion was found stuck atop a telephone pole, and was causing concern among the public. CDFW staff decided it would be safest for the public and for the animal to immobilize it and return it to the nearest available habitat.

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### Funding

CDFW’s Wildlife and Fisheries Division received an allotment of \$450,000 for HWC incident response, which was distributed among the Regions and WIL according to anticipated need. This was estimated by the following factors: 1) areas most affected by the current drought; and 2) workload estimates based on Departmental records relating to recent responses to HWC incidents.

Funds were spent on staff time in addition to much-needed equipment required to facilitate timely and effective responses to HWC wildlife incidents. Such purchases included darting and/or immobilization equipment, animal transport crates, and bear trap trailers. While the initial \$450,000 allotment helped to alleviate some of the pressures associated with HWC response, the time charged to the D-4 account was modest at best, as charging 100% of all staff time dedicated to HWC response and coordination to this PCA would have caused over-spending of the account. This reflects an overall need to continue or augment existing funding to the Department’s HWC Program.

Instances where “Time Claimed for PCA 21290” exceeds “Estimated Time Spent on Incidents”, can be attributed to time spent on internal DRIP D-4 coordination, including developing the tracking sheets, recording and collecting the data, quality-checking, and calling into conference calls to discuss new protocols.

**Table 1. Staff time claimed and actual time spent on responding to Human-Wildlife Conflict Incidents (9/1/2015 - 6/30/2016).**

Region	Time Claimed for PCA 21290 (hours)	Estimated Time Spent on Incidents (hours)	Percentage of DRIP D-4 Allotment Spent:
Northern	1450.5	1846.98	123.74%
North Central	1249.5	835.25	127.92%
Bay Delta	546.75	583.05	63.11%
Central	1597.55	1381.025	98.53%
South Coast	0	578.68	74.93%
Inland Deserts	554	636	113.77%
Wildlife Investigations Lab	926.25	1183	123.74%
<b>Grand Total</b>	<b>6324.55</b>	<b>7043.985</b>	<b>101.77%</b>

### Conclusions

Overall, the CDFW logged more than 7,000 hours responding to more than 10,000 human-wildlife conflict incidents between September 1, 2015 and June 30, 2016. This incident reporting structure was made possible by the coordination of CDFW headquarters and regional staff as well as the much-needed funding from the Governor's Emergency Drought Relief Fund. As is apparent by the data presented here, the CDFW primarily responds to animal welfare incidents and situations where animals cause property damage, both of which can be exacerbated by extreme and continued drought conditions.

Intra-agency (CDFW) communication was much improved and produced positive results for data collection/sharing. This, in turn, provided management with preliminary data to suggest further refinement/improvement of the CDFW's response to human-wildlife conflict. Furthermore, enhancements of administrative functions which streamlined processes (e.g. hiring, contracting) were realized at the field level.

If the drought continues into and through FY 16, continued budget augmentations (or enhancements) to coordinate department response to human-wildlife conflict will be necessary. The CDFW expects increased human wildlife conflicts with continued poor habitat conditions and diminished prey resources. This has resulted in wildlife coming into urban and semi-urban settings looking for food. Also, orphaned bear cubs and mountain lion kittens will increase as well as juvenile animals that become nutritionally compromised. Scarce resources can result in depressed immune systems which increase the potential for disease or otherwise distressed animals in 2016. Drought effects also increase wildfire potential that is additive to human-wildlife conflicts described above. These likely scenarios will require the CDFW to be prepared for response.

### Acknowledgements

This report was made possible by the diligent efforts of CDFW's Human-Wildlife Conflict Coordination Team: Steve Torres, Mike Giusti, Richard Callas, Canh Nguyen, Conrad Jones, Greg Gerstenberg, Marc Kenyon, Rebecca Barboza and Carrie Del Signore. Furthermore, internal coordination with CDFW's Law Enforcement Division was pivotal in providing consistent reporting: Chief David Bess, Assistant Chief Roy Griffith (Ret.), Captain Dan Lehman, Lieutenant Michael Milotz, and Judy (Jude) Thomas. We appreciate the assistance of Chet Egbert in developing the GIS application graphics.