Request for Approval under the "Generic Clearance for Citizen Science and Crowdsourcing Projects" (OMB Control Number: 2080-0083)

TITLE OF INFORMATION COLLECTION: Citizen Scientists Improving Pet Health: Healthy Pets – Healthy Humans

PURPOSE: The main objectives of this project are to assess the spatial and temporal trends in pet diseases/health issues in residential settings and identify hotspots across the US.

NEED AND AUTHORITY FOR COLLECTION:

The data collected from this survey can help to identify areas of the country where pet health issues may be linked to exposures from the environment. As humans and their pet companions spend time in similar environments, this could have important implications for human exposures as well. Once collected, the data will be assessed for linkages to possible exposures routes including drinking water, water quality, consumption, inhalation and dermal contact.

USES OF RESULTING DATA: We anticipate that this citizen science participation effort will gather sentinel data on disease/health across the US. These data will be summarized and included as part of EnviroAtlas, a publicly available EPA/ORD website and mapping application (https://www.epa.gov/enviroatlas). As these data will be readily available via an easy-to-use web application, this will close the information loop to citizen scientists.

DATA COLLECTION METHODS: We have developed a short web survey (6 to 8 minutes) using Survey Gizmo software -- which is a user-friendly, online survey tool. The survey is targeted for respondents that are current pet owners of cats and/or dogs. This survey will record specific types of disease/health data (e.g., cancers, diabetes, asthma, allergies, and tick-borne) and other related data (e.g., sex, age, breed, weight, and indoor/outdoor) on respondent's dogs or cats. The Survey Gizmo tool can then be used to export the collected data as a spreadsheet or text file. The collection of the data will be voluntary, low-burden, and low-cost for the Federal Government. The data collection is non-controversial and individual responses will not be made public but will be aggregated to a zip code level before being made available via the mapping application.

PARTICIPANT UNIVERSE: The participant universe will consist largely of those individuals who have pet cats and/or dogs and are willing to voluntarily fill out the survey questions. At present, the respondents will be composed mainly of individuals who are interested in pets and pet health and visit websites related to these topics. Additional respondents will be obtained through allowing individuals to forward the survey link to those who may be interested in filling out the survey. Respondents may also come from individuals who see a press release or other communication materials that contain a link to the survey. We expect our respondents to be a wide-ranging subset of the general public. This information collection will be conducted over a three-year period using low-burden web surveys.

Category of Respondent	No. of Respondents	Number of responses	Participation Time per response	Burden Hours
Public	300,000	300,000	8 minutes	40,000

Total burden hours: Multiply the Number of responses by participation time per response and divide by 60 then multiple by total number of respondents.

AGENCY COST: The estimated annual cost to the Federal government is $51,600.

20 hours per week (ORISE fellow) x $31.25 hourly rate = $30,000 annual

10 hours per week (EPA Fed) x $45 hourly rate = $21,600

STATISTICAL ANALYSIS:

After initial collection for a year we will conduct basic exploratory analysis of the raw data including data visualization, measures of averages, distribution, spread and skew. Comparing of groups using (on and two tailed t-tests), checking for linkages and association between variables (X^2, Pearson, Kendall). Testing cause and affect between dependent (pet health) and independent variables (pet behavior, house, age, water and food sources, environmental conditions) with multi-variate analysis (MANOVA, Regression) and decision tree analysis (Random Forest, CART).

DATA QUALITY ASSESSMENT PROCEDURES:

Survey Gizmo automatically stores participant survey responses in a password protected data file on their website. Also, this software program provides downloadable MS Excel data files, survey reports, and individual pdfs for each respondent. These survey data and other documents will be stored on a local network at EPA. Only authorized personnel (i.e., research staff) will have access to the study data/documents. The data will undergo QA/QC as outlined in the EnviroAtlas Project QAPP (v1.1 signed 12/2012) and subtask QAPP National Pet Health Survey (D-SED-EFAB-024-QAPP-01; signed 10/2016) by internal EPA staff and student contractors. Further analysis of the data will occur yearly to look a statistical trends and relationships with other datasets. The summarized data results will be posted as part of the EnviroAtlas as a layer in the mapping application with links to supporting documentation (i.e. reports, factsheets, journal articles, and metadata).

ADMINISTRATION OF THE INSTRUMENT: (Check all that apply)

[x] Web-based or Social Media
[ ] Telephone
[ ] In-person
[ ] Mail
[ ] Other, Explain

INSTRUMENT: Append a pdf copy of the survey titled: **Pet Health Survey: Healthy Pets - Healthy Humans.pdf**

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