

**ALAMEDA COUNTY
VECTOR CONTROL SERVICES DISTRICT
COUNTY SERVICE AREA VC 1984-1**



**ANNUAL REPORT
FY 2003-04**

ENVIRONMENTAL HEALTH SERVICES
1131 HARBOR BAY PARKWAY, SUITE 166
ALAMEDA, CA 94502

MISSION

The mission of the Vector Control Services District is to prevent human disease, injury, and discomfort to the residents of the district by controlling insects, rodents and other vectors and eliminating causal environmental conditions through education, legal enforcement, and direct pesticide application.

DISTRICT SERVICES

Request for Service Investigations

- Conduct investigations in response to service requests concerning vectors, assess the extent of the problem, and take the appropriate action.
- Investigate reported problems concerning cockroaches, flies, fleas, lice, yellow jackets, and other insects, as well as, ticks, mites, and spiders, and render the appropriate service.
- Provide advice on insect, tick and spider identification and recommended methods of control.
- Conduct surveys of insects and arachnids of public health importance and maintain a reference collection.
- Survey and effect control of cockroaches in public sewers, utility boxes, and storm drains.
- Conduct yellow jacket and feral bee control in public areas or by contract with other agencies.

Wildlife Management, Domestic Animals and Rabies Control

- Oversees the administration of quarantine measures regarding animal bites.
- Conduct investigations of nuisances related to bats, skunks, opossums, raccoons, dogs, cats, rabbits, pigeons, chickens, and fowl.
- Trap biting or nuisance mammals when preventative alternatives are not possible or will probably be ineffective.
- Work cooperatively with local animal control agencies, and compile statistics for an annual report for the State Health Department.

Rodent Control

- Make recommendations on rodent proofing and suppression of rats and mice.
- Conduct rodent suppression during disease outbreaks or emergencies.
- Conduct surveys of rat populations to assess species prevalence and population control needs.

- Conduct district-wide inspection and baiting of sanitary sewers and waterfronts for rats.
- Inspect and test sewer laterals and mains to detect breaks, which may allow rats to expand their range into neighborhoods.

Solid Waste Problems

- Investigate complaints regarding solid waste handling and storage problems involving refuse, human or animal waste, and odors at residential properties and businesses.

Vector Borne Disease Surveillance and Control

- Investigate reports of animal or human illness such as Lyme disease, Psittacosis, Scabies, head lice, Reptilian Salmonella, Ehrlichiosis, and Rabies to determine cause, and recommend preventative measures.
- Assist the public in submission of ticks to the public health laboratory for testing.
- Collect rat fleas and determine the potential risk of plague transmission.

Public Education and Information

- Make presentations to groups on vector control, and participate at public events.
- Provide educational information on vectors and vector borne diseases for individuals and groups.
- Staffs public displays at health fairs, special events, and the county fair.
- Post the annual shellfish harvesting quarantine notices on the Alameda County bay shoreline.

Legal Enforcement

- Enforce state laws, regulations, and local ordinances when necessary to protect the public from vectors and related problems.

INTRODUCTION

Alameda County Annual Report for County Service Area (CSA) VC 1984-1 for Vector Control is presented to the Alameda County Board of Supervisors in compliance with Section 25210,77a of the Government Code; County Service Area Law, and Chapters 5.24 and 6.32 et. Seq. of the Alameda County General Ordinance. The report, which includes the recommended benefit assessment for the fiscal year 2003-04, is submitted for review and public hearing.

This report gives the history of how and why the County Service Area (CSA) known as the Alameda County Vector Control Services District was formed, explains how the assessments are calculated, and includes tables of assessments since the CSA was formed in 1984 as well as the proposed 2003-04 assessments.

This report is also available for review at the Vector Control Services District, 1131 Harbor Bay Parkway, Suite 166, Alameda, CA 94502. In addition, current reports will be posted on our website at (<http://www.acvcso.org>).

BACKGROUND & HISTORY

The County Service Area (CSA) 1984-1 for Vector Control was established in June 1984 in order to meet the public needs by providing a comprehensive vector control program. Environmental Health Services was experiencing dwindling financial resources causing severe cutbacks in vector control in Alameda County. In response, the Board of Supervisors created the County Service Area following confirming election for Measure A, in which over 70% of the voters approved formation of the CSA. The CSA now includes 12 of the 14 cities of Alameda County and the unincorporated county areas. The CSA excludes the cities of Emeryville and Fremont, which opted to seek alternative sources for administering vector programs. The City of Dublin was initially not included in the CSA but was annexed by the Board of Supervisors in 1992 at the request of the City Council of Dublin, which voted to join the District.

CITY OF OAKLAND

In 1987, it was recognized that the City of Oakland had a severe rat population, originating primarily from the sanitary sewers, which exceeded the capabilities of the district to cope with the problem. The

City of Oakland approved a supplemental assessment, which was first levied in fiscal year 1988-89, and provided for two additional vector control officers.

CSA ALAMEDA COUNTY VECTOR CONTROL **2003 ANNUAL SUMMARY**

Introduction

The district experienced staffing shortages for the past two years. The Senior Vector Control Officer position in charge of urban rodent control has been vacant since August of 2001. After 2.5 years of revision of the VCO Job Specifications by Human Resources, we hope to fill this important position this spring. We have lost two VCO's to disability retirement and three others are on temporary disability due to injuries or serious medical conditions. A vacant Vector Ecologist position remains unfilled, because no qualified applicants have been interested in the position. We hope to hire a trainee for this position before the end of the year. These vacancies have had a considerably impact on the disease surveillance program and district initiated work, but existing staff have been able to handle all demand services from the public. Since the district provides a variety of services in a wide range of program areas, seasonal and environmental conditions can influence work priorities. The total amount of staff time lost is about three employee years.

Urban Rodent Surveillance

The urban rodent surveillance program concentrates on the monitoring and control of domestic (old world) rats and mice of the rodent family Muridae. The program goals include dissemination of advice, and administration of a strategy to suppress populations of Norway Rats, Roof Rats, and House Mice. The District responds to service requests concerning rats and mice at single-family residences, apartments, and businesses. In 2003, the district received 1501 requests for service from the public concerning domestic rodents, representing 33% of all requests. Staff also performed an additional 10,506 field services concerning domestic rodents, including smoke tests, consultations, field surveys, follow up evaluations, and enforcement actions. When there is evidence that rats are surfacing near sewer laterals, field staff conduct inspections to locate broken sewer lines, and take appropriate action to insure those repairs are made. Introduction of smoke producing flares or dye into the sewers helps locate breaks in the lines, and document locations where rats can exit the sewers and infest neighborhoods. District staff performed found 23 broken sewer laterals and performed smoke and/or dye tests to document the break. Staff Supervisors advise Public Works Supervisors at the City of Oakland, and other municipalities, to facilitate repair of broken sewer lines and laterals. The Disease surveillance staff trapped 19 Norway Rats from the port of Oakland area and submitted blood samples for Plague Testing. None of the animals had been exposed to plague, but Oriental Rat Fleas, the vector

of Urban Plague, were collected from some of the rats

The County has had a long history of Norway Rats invading homes and neighborhoods from the sanitary sewers of Oakland, due to the age and cost of maintenance of the sanitary sewer system. Service requests for Norway Rats totaled 253 in 2003, representing 80% of all service requests for this species countywide. The property owners of Oakland are assessed an additional \$ 1.28 over the standard rate of \$ 5.92 per residence, to cover the cost of placing anticoagulant bait, when necessary, in to the sanitary sewers. A total of 8175 inspections and 1560 treatments were made into the sewers of Oakland, Alameda, Albany, Piedmont and San Leandro. This represents a 17% increase in the number of inspections from 2002, but an 18% reduction in the manholes, which had to be treated. It looks like the pulse-baiting concept is working. As progress is made the District shift emphasis to improvement of the sewer infrastructure, working closely with the various Cities to effect repairs when breaks are documented.

In 2003 an effort was made to evaluate areas with rat activity in the sewers and survey areas with clusters of rat complaints in neighborhoods on the surface of the ground. Staffing shortages impacted this plan, but some progress was made with the help of college students, working for the summer. Staff worked closely with a neighborhood Association in an area bounded by 82nd to 84th Avenues in Oakland. A total of 189 properties were contacted and surveyed. Smoke tests or dye tests resulted in the documentation of 12 broken sewers. Staff arranged community meetings with local residents and the City of Oakland, and agreements were made to improve environmental conditions in the affected neighborhoods. Staff also worked with the City of Albany, residents and businesses on Solano Avenue to improve environmental conditions, and coordinate repair of broken laterals found during sewer baiting surveys. Active rat burrows at ten locations, including the Oakland Kaiser Convention Center, Lake View School, Lake Merritt Lodge, and Laney College were treated with anticoagulant rodenticides. These areas will be revisited routinely to insure that the suppression of these rodents was effective.

Vector Control Officers responded to 438 Service Requests for Roof Rats this year, representing 29 % of all rodent-related services. This is a slight reduction from the previous year, but roof rats are well established throughout the suburban and semi urban areas of Alameda County. The District responds to requests by homeowners, businesses, and communities regarding roof rat activity. Even though live trap surveys indicate that this rat has insignificant numbers of fleas and other ecto-parasites, historical accounts of bubonic plague site this rat as the most significant species associated with Bubonic Plague Epidemics. This is probably the result of this species' ability to live in a variety of habitats in close proximity to humans. The District has established a high priority to ensure that these rodents do not enter homes, and expose occupants to potential diseases. Homeowners and landlords are advised on recommended structural modifications to prevent rodent ingress. The perimeter yard is also surveyed for conditions conducive to rodents, and recommendations to eliminate these conditions are given. Staff responsibilities during the inspection include consultation, recommendations for habitat reduction, distribution of brochures (or fact sheets), and enforcement of Environmental Health Laws when necessary. If evidence is found suggesting an infestation over a larger area than a single-family residence,

neighborhood surveys are conducted.

Sylvatic Rodent Surveillance

Sylvatic rodents are native species to California and are confined to the rodent families Sciuridae, Cricetidae, and Arvicolidae. These animals are normally confined to the rural and semi-rural areas of Alameda County. Many of these animals are reservoirs of zoonotic diseases such as Bubonic Plague, Hantavirus Pulmonary Syndrome, Ehrlichiosis, Lyme disease, and Babesiosis. Occasionally Cricetids rodents, primarily deer mice, will enter buildings and put occupants at risk to exposure to hantavirus disease. Since Alameda County has a history of bubonic plague, surveillance of the sylvatic plague reservoirs in this county is an on going program. In addition, there is an ongoing surveillance of Sin Nombre Virus and White Water Arroyo Virus, in response to cases on human illness from a few years ago. The district conducts rodent surveys routinely, usually working cooperatively with the California Department of Health Services, in an effort to minimize outbreaks of these diseases. In 2003, thirty-eight deer mice were captured and samples of their blood was tested for Sin Nombre Virus and White Water Arroyo Virus. None of the mice were positive for hantaviruses and the arenavirus samples are still being worked on at the University of Texas in Galveston. Sylvatic Rodent surveys also provide an opportunity to advise the public on the potential health risks and the necessity to avoid exposure to these animals.

Rabies Surveillance

The District and the various animal control agencies administrate the rabies surveillance programs in Alameda County. The Alameda County Animal Control and the thirteen municipal animal control agencies are responsible for monitoring rabies associated with cats and dogs. The District conducts surveillance over skunks, bats and occasionally other wildlife, by responding to service requests, and submitting specimens to the Alameda County Public Health Laboratory for rabies testing. Raccoon Rabies, a strain specific for this animal, is not present in California, and is confined to the Eastern United States and Canada. Raccoons can be exposed to bat or skunk rabies, but positive animals have been rare in recent years. The district also investigates animal bite incidents and prepares an annual report for the California Department of Health Services.

One hundred and eighty animals including dogs, cats, raccoons, skunks and bats were submitted to the Public Health Laboratory for rabies testing. Eight bats and two skunks tested positive for the rabies virus. The number of rabies positive animals statewide was 248, a reduction of 25% over the previous year including 179 bats, 62 skunks, 3 foxes, 2 cats and 2 dogs.

Wildlife Management

The district responded to 1101 service requests concerning wildlife, and provided almost 2,330 hours of field support within or near residential areas. This represents a minimal drop in the number of service requests from the year 2002. The number of hours spent on each request, reflects an effort to follow up on these complaints; to insure that structural improvements have been made to minimize reoccurrence of

an infestation. Most of these activities involve responding to service requests about raccoons, skunks, squirrels, or opossums, and advising homeowners on how to exclude these animals from their residences, and making their property unattractive to them. When circumstances require direct action, Vector Control Officers may assist property owners by coordinating with the USDA to set traps, pick up and remove the animal. On occasion staff will assist occupants to gain assistance from local service agencies to assist the poor or elderly with making structural repairs.

In 2003, a total of 48 wild animals, primarily skunks, raccoons, and opossums, had to be captured and euthanized by Wildlife Services in Alameda County neighborhoods this year. This might have been unnecessary if people would not offer food to these animals. The problem of wildlife in residential areas is becoming an ever-increasing problem. It is important for residents to locate and block portals allowing animals access to the interior of structures from the sub floor or the attic. The District was not responsible for this program when it was formed, but animal control agencies struggling with continuously tight budgets, have been unable sustain the program. The only solution for this problem is to enact strict ordinances concerning the feeding of wildlife by animal fanciers. The lack of natural habitat in the urban areas results in the animals being forced to inhabit human structures, resulting in property damage, and increased risk of residents or pets being attacked. Staff will consult with the public regarding other animals such as pest birds, carnivores and larger rodents like squirrels. The Web site offers advice on exclusion and control, and staff emphasize preventative measures during their inspections. A Grey Fox bit an employee at Sandia Laboratory that he was feeding by hand. The fox was captured and tested negative for rabies. The three orphaned fox puppies were taken to Lindsey Museum in Walnut Creek, to see if they could be reared to adults without a mother to be released into the wild in the Sandia area. Feeding these animals is not in the best interests of the animals. There is plenty of natural food available to support a health wildlife population. USDA records also show that wildlife caused property damages to domestic animals, grazing land and buildings amounting to over several thousand dollars. Animal depredation activities included removal of two red foxes that were killing chickens, three coyotes that were killing lambs, and feral pigs disrupting landscaping.

Mosquito Surveillance

Alameda County Vector Control performs mosquito surveillance for the City of Albany. The Alameda County Mosquito Abatement District serves the remainder of the County. Over the years staff have documented a number of mosquito sources in Albany, primarily in the drainage close to the San Francisco Bay, and along the Southern Pacific Railroad Tracks. Mosquito breeding is usually found in the early spring when ditches do not completely drain after seasonal rainfall. The rapidly expanding West Nile Virus (WNV) epidemic has resulted in increased energy being devoted toward surveillance of mosquitoes in the Albany area, and preparation for the ultimate arrival of the disease. The Senior Vector Control Officer assigned as the Community Education Coordinator has done an outstanding job of getting the news out on WNV, including articles in the District's Newsletter and on the Web page. In addition, he has set up a mosquito surveillance program at various locations within the city, utilizing dry ice baited EVS Traps, resulting in the collection of mosquito samples. The surveillance effort has allowed us to increase the number of mosquito species known to be present in Albany and has identified

new sources for Culex tarsalis and Culex pipiens. These two mosquitoes are considered to be competent vectors for WNV. The Vector ecologist has evaluated a large number of birds, primarily in the Family Corvidae, which died under suspicious circumstances, and shipped likely samples to UC Davis for WNV Testing. As of this date four birds have been shipped, but no WNV positive birds have been found in Alameda County.

Venomous Arthropods

The district provides advice and identification of spiders, scorpions, bees, and a wide variety of wasps, including yellow jackets. Recommendations are made for exclusion and control of these pests in order to help property owners to reduce their risk of exposure. In the case of yellow jackets and honey bees, the risk of stinging incidents increases the urgency for timely response. The District will destroy the nests of these insects when they are located in close proximity to people, but outside of habitable structures. In addition, the district has a contract with the East Bay Regional Parks, to control ground nests within the county parks. In 2003, the District responded to 316 venomous wasp and 289 honeybee complaints. An additional four yellow jacket nests were controlled within the East Bay Regional Parks. Yellow jacket populations increase when there are mild winters and the spring rains end in February. Most yellow jackets nest in the ground, and late rains tend to expose the developing nests to moisture and mold. Since the district is not licensed to make structural repairs to buildings, control of bees and wasp nests inside buildings are normally referred to structural pest control operators for abatement.

Miscellaneous Arthropods

The district responds to service requests regarding a variety of arthropod and insect pests such as spiders, ticks, mites, head lice, cockroaches, flies, fleas, or ants that infest homes and commercial facilities. A total of 350 service requests for identifications, consultations and inspections were responded to concerning these pests. From time to time, the District will receive service requests concerning biting arthropods other than mosquitoes. There were three incidents concerning bedbugs that were investigated by the vector ecologist. Complaints about biting arthropods numbered 137, including Fleas (47), mites (13), lice (12), and ticks (9), were also investigated. In nine of the cases, Tropical Rat Mites were identified as the cause, and advice on eliminating the mites and the rodent hosts was provided. In three of the cases, no biting arthropods were found and it is possible that the victims were exposed away from their residence or were possibly suffering from delusory parasitosis. The term delusory does not imply that they do not have the sensation of being bitten. Some people with skin conditions or unusual reactions to drugs may experience sensations of being bitten by minute arthropods. In these instances, they are referred to their physicians for further evaluation.

As part of the Lyme disease surveillance program, staff collect and identify ticks, and may recommend testing for tick borne disease when appropriate. Seventeen field surveys were conducted at nine locations, which resulted in the collection of 1,175 questing ticks of which 651 were *Ixodes pacificus*, the Lyme disease vector. Three of these ticks were confirmed to be Lyme disease positive by direct

immuno-fluorescence (IFA). The three positive ticks represented about 0.046% positive for Lyme disease from the samples taken so far. This number is far below the two percent figure, which is the typical average for endemic Lyme disease areas in California. Alameda County continues to have a low incidence of locally acquired Lyme disease, mainly due to its' isolated number of suitable habitats for the reservoir and vector. Thirty-seven residents or pets from Alameda County were bitten by ticks. These were submitted to the Sonoma County Public Health Laboratory for Lyme disease testing. All local ticks which bit Alameda County Residents tested negative for the Lyme disease spirochete. The District now has the capability of conducting Lyme disease IFA Tests. We hope to expand this capability when new staff are hired.

City of Berkeley

The District completed the collaborative study with the USDA to administer an injectable sterilant to California ground squirrels at Shore Line Park. The purpose of the study was to reduce the reproductive capacity of the resident squirrel population. The study showed that the number of juvenile squirrels dropped during the study. The material was impractical however due the fact that the animals had to be injected with the birth control agent. The USDA is now working on an oral version, which can be fed to the squirrels mixed with grain.

Inventoried Sources

The District maintains an inventory of stables and kennels, and inspects them routinely to prevent nuisances such as odors, insects, or rodents. Animal hobbyist facilities are also evaluated when Alameda County Animal Control requests an inspection, at the time of their annual permit renewal. At the current time there is not any statutory requirement or authority to conduct inspections of pet shops, animal grooming salons or livestock holding facilities, but we will inspect them when complaints are received regarding nuisances. A total of 30 inspections, and these facilities were conducted, either in response to a use permit renewal or a service requests from the public.

Nuisance Abatement

Accumulations of garbage, rubbish, junk cars and stockpiles of animal manure can become public nuisances when left unattended prior to disposal. In addition, these nuisances can provide harborage and nourishment for rodents, flies and other pest arthropods that might result in human exposure and risk of disease. The District responds to complaints about these conditions and will follow up to assure compliance with applicable laws and regulations. The District responded to 163 service requests concerning nuisances, primarily garbage, resulting in 1,487 field services including investigations, progress assessments, correspondence, and compliance inspections.

Public Education

Community Events: Staff participated at 18 health fairs, conducted 5 presentations at communities

throughout the county, and participated in the public health week activities. The increased work on West Nile Virus resulted in less time being available to plan attendance at community events. Staff set up informational booths at 10 libraries during Vector Control Awareness Week. The district received 68 Request for Service by E-Mail from our web site. Even though we received requests for information from residents from as far away as Eastern Canada, most of the inquiries were from Alameda County Residents. Spanish speaking staff are currently working on the Spanish versions of all of our commonly used brochures. We plan to distribute information in Spanish to schools with Spanish speaking students.

Pesticide Use Summary
2003

Pesticide	Manufacturer	Formulation	Target Pest	Amount Used	Applications
Delta Dust	AgrEvo	Dust	Yellow Jacket/ Wasp nests	0	0
Contrac Super Blox	Bell Labs	8oz or 1 lb blocks	Domestic Rodents	887 Pounds	122
Ditrac Tracking Powder	Bell Labs	Dust	Domestic Rodents	2 Pounds	6
Drione Dust	Roussel UCLA	Dust	Yellow Jacket/ Wasp nests	0	0
Quintox Meal	Bell Labs	Meal	Domestic Rodents	0	0
Contrac Pellets	Bell Labs	Pellets	Domestic Rodents	26.34 Pounds	23
Contrac Blox	Bell Labs	1 ounce	Domestic Rodents	1.18 Pounds	5
M-Pede	Mycogen	Liquid	Bees	0.149 Gallon	4
Maxforce	Clorox	Large Bait Stations	Cockroaches	0	0
Wasp Freeze PT515	Whitmire	Aerosol Spray	Wasps	11.44 Gallon	83
PT565	Whitmire	Aerosol Spray	Wasps	0	0
Drione Dust	Aventis	Dust	Yellow Jackets	29.01 Pounds	93
Rozel	Lipha Tech	Tracking Powder	Domestic Rodents	1.75 Pounds	2
Poison Free	Victor	Aerosol	Yellow Jackets	0.36 Gallon	6
BTI Briquette	Summit	10.0%	Mosquitoes	0.17 Pounds	2
BTI Liquid	Valent	VectoBac 12-AS	Mosquitoes	0.02 Pounds	5*
Methoprene	Wellmark	ALL SR-20	Mosquitoes	0.000623 Pounds	5*

The district follows a policy of Integrated Pest management, in conformance with the Board of Supervisors IPM Plan. The largest amount of pesticides are applied to suppress rats in the sewers or to destroy yellow jacket nests. The total amount of Larvicide applications for mosquitoes is less than a quarter pound of active ingredient. The (*) for BTI Liquid and Methoprene Liquid refer to a field formulation called Duplex, which is a mixture of the two biorational insecticides.

- **BENEFIT ASSESSMENT**

The Board of Supervisors reviews annually the proposed rate of assessment, holds public hearings, and then establishes the assessment for the fiscal year. Assessments are levied and collected at the same time and in the same manner as the general county taxes. They are subject to the same fines, penalties, and forfeiture as property taxes. The assessment charge levied against each parcel is available for review at the Vector Control Services District Office, and at the Clerk of the Board Office at 1221 Oak Street, Oakland, 5th floor.

Assessments are based on land use as classified by the Assessor's Office. A basic assessment rate is established as a single benefit unit (BU), which is applied to the schedule for assessments according to land use as follows:

LAND USE CATEGORIES

1. Single Family Residence/Condominium	1BU
2. Vacant Land Parcel	1BU
3. 2-4 Residential Units	2 BU's
4. Commercial and Industrial Property	2 BU's
5. Large Agricultural Rural Properties	2BU's
6. 5 Residential Apartments or more	5 BU's
7. Improved Commercial Property	5BU's

ASSESSMENT FOR ONE BENEFIT UNIT (BU)
(Single Family Residential and Vacant Land)
CSA Basic Rate and Oakland
1984-2003

FISCAL Year	CSA Basic Rate	OAKLAND Supplemental Rate	OAKLAND Total Rate*
84-85	\$3.15	\$0.00	\$3.15
85-86	2.66	0.00	2.66
86-87	2.66	0.00	2.66
87-88	3.24	0.00	3.24
88-89	3.30	0.70	4.00
89-90	3.58	0.66	3.84
90-91	3.80	0.70	4.50
91-92	3.96	0.70	4.66
92-93	3.96	0.70	4.66
93-94	4.72	1.04	5.76
94-95	4.82	1.06	5.88
95-96	5.82	1.26	7.08
96-97	5.92	1.28	7.20
97-98	5.92	1.28	7.20
98-99	5.92	1.28	7.20
99-00	5.92	1.28	7.20
00-01	5.92	1.28	7.20
01-02	5.92	1.28	7.20
02-03	5.92	1.28	7.20
03-04	5.92	1.28	7.20

***Includes Oakland Supplemental initiated 1988-89**

**CSA VECTOR CONTROL SERVICES
RECOMMENDED ASSESSMENTS
FY 2004-2005**

Use/Size	Benefit Unit Assessment	
	Basic	Oakland
1. Single Family Residence/ Condominiums	\$ 5.92	\$ 7.20
2. Vacant Land	5.92	7.20
3. Multiple Residential small (2-4 Units)	11.84	14.40
4. Commercial, Industrial	11.84	14.40
5. Large Rural Property (More than 10 acres)	11.84	14.40
6. Multiple Residential	29.60	36.00
7. Large Commercial (Hotels, Motels, Mobile Home Parks)	29.60	36.00