

# Frogs on Floor Four!

You own a ten million dollar resort on Maui with two hundred rooms that go for \$300 per night. Your average occupancy is 100 percent. While you are creating the hotel's annual budget, an employee informs you that the property has a small but growing infestation of coqui frogs. You've heard that coqui frogs are causing problems on the Big Island—driving away customers looking for a quiet nights' sleep and reducing the value of the real estate.

You ask your managers to come up with several strategies in response to this news. It's your job to maintain a profitable resort. Choose the strategy you feel will best protect your financial interests. Revise the base budget on the resort budget worksheet to reflect your choice.

## Coqui Frog Response Strategies

### A. Do nothing

*Direct cost:*

Twenty percent lower occupancy rate due to guests who refuse to put up with noise

*Potential cost:*

Continued drop in occupancy as reputation for sleepless nights builds, diminished property value, legal battles

### B. Train employees to spray citric acid

*Direct costs:*

\$20 per hour @ 50 hours

\$4,000 for training manuals, equipment and safety gear

\$1,000 for citric acid

*Potential cost:*

Medical expenses in case of employee injury, re-treatment

### C. Hire outside company to spray citric acid

*Direct cost:*

\$200 per hour @ 25 hours

*Potential cost:*

Re-treatment

### D. Use children's camp attendees to catch frogs

*Direct cost:*

\$25 per hour @ 4 hours to train camp counselors how to catch and dispose of frogs

5 percent lower occupancy rate due to guests who refuse to put up with noise

*Potential cost:*

Ineffective; reduced occupancy; diminished property value

### E. Develop PR campaign celebrating frogs

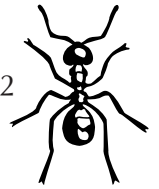
*Direct cost:*

\$3,500 for a marketing campaign: brochures, advertisements and radio spots

\$30 per hour @ 40 hours for extra marketing staff

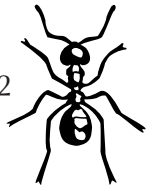
*Potential cost:*

Legal battles



# Resort Budget

	<i>Base - Annual</i>	<i>Revision due to Coqui</i>	<i>Midyear Revision</i>
<b>Revenue</b>			
200 rooms x \$300 x 365 x occupancy	100% occupancy 17,520,000		
Food & Beverage (and other)	5,000,000		
<b>Revenue Subtotal:</b>			
10% tax (based on revenue listed above)			
<b>Add Total Revenue:</b>			
<b>Expenses</b>			
(Expenses in bold are fixed; they stay the same regardless of occupancy.)			
7.25% Occ tax	1,270,200		
4% GE tax	2,700,000		
<b>Management Staff</b>	<b>2,700,000</b>	<b>2,700,000</b>	
Housekeeping	2,200,000		
<b>Landscaping/Engineering</b>	<b>1,000,000</b>	<b>1,000,000</b>	
Reception, Bell Desk, Valet	2,200,000		
Utilities	1,900,000		
Laundry	420,000		
<b>Pool Cleaner</b>	<b>50,000</b>	<b>50,000</b>	
<b>Phone and Internet</b>	<b>125,000</b>	<b>125,000</b>	
<b>Property Insurance</b>	<b>900,000</b>	<b>900,000</b>	
Property tax (\$12 per \$1,000 of assessed value)	1,000,000		
Food & Beverage and Other (Sales, Administration)	3,000,000		
<b>Marketing Expenses</b>	<b>1,000,000</b>	<b>1,000,000</b>	
<b>Add Total Expenses</b>			
<b>Net Income or Loss</b> (Total revenue minus total expenses)			



# Resort Budget Explanation

General Manager: \_\_\_\_\_  
Administrative Assistants: \_\_\_\_\_  
Secretary: \_\_\_\_\_  
Public Relations Spokesperson: \_\_\_\_\_

*Strategy your group chose:*

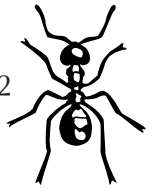
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*Why:*

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*Midyear revisions:*

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# A Most Unwanted Neighbor - Coqui Frogs



## From The Maui News

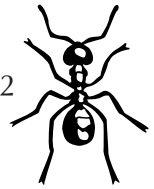
**March 14, 2010 - *Kia'i Moku* by Adam Radford**

A recent trip to Hilo highlighted the impact coqui frogs can have on our quality of life. It was not just the chorus heard throughout town and in my hotel room, but the fact that they could be heard while having dinner, enjoying a beach park and hiking through native forests. They're everywhere. Recent estimates indicate that coqui have infested more than 60,000 acres of East Hawai'i, from the ocean to 4,000 feet in elevation. With Hawai'i County now planning to liquidate its coqui-control equipment, this noisy neighbor seems to have become a permanent resident on the island of Hawai'i.

My work creates many opportunities to talk about coqui, and I am often asked why they are perceived as a nuisance in Hawai'i when they are beloved in their native home of Puerto Rico.

One consideration is that they have no natural enemies here and can reach population densities more than twice that of their native range. This may cause significant problems for native insects (which they eat), change soil composition to the benefit of non-native plant species and compete with Hawai'i's native birds for food. Possible economic impacts in infested areas include diminished property values and sales, a change in the quality of visitor experiences due to their persistent nocturnal calls and decreased sales in the floriculture and nursery industry.

During my short visit to Hilo, I learned that a colleague with deep ties to Hawai'i agriculture was facing the prospect of moving and foregoing personal professional opportunities, primarily because



of the coqui. These experiences strengthened my motivation to keep coqui from becoming widely established on Maui.

Coqui are believed to have been introduced to Hawai‘i by hitchhiking on plants or associated products in the late 1980s. Since then, coqui have shown up on most of the main Hawaiian Islands, in California, and Guam on plant shipments. This is still the primary avenue for dispersal, particularly from heavily infested areas. To help minimize the risk of introducing coqui to your neighborhood, the Maui Invasive Species Committee started a coqui-free certification program. The voluntary program encourages plant industry participants to adopt specific practices to reduce movement via the nursery trade. If you see a business designated as “coqui-free,” you can feel confident that you will not be purchasing coqui along with your plants or plant products.

Like the Big Island, Maui has coqui. Unlike the Big Island, Maui has only six infested areas, which cover an estimated 227 acres. Eleven population centers (areas with five or more calling males) have been removed since 2004. Five others have very low numbers of coqui. Really, only one substantial population remains. Maui has kept populations from becoming established by quickly responding to reports of new coqui locations. Although new introductions from infested areas are a constant concern for Maui residents, quickly identifying and capturing a few rogue males typically prevents a couple of coqui from becoming thousands. Left unchecked or unreported, coqui populations on Maui would be sure to rival East Hawai‘i at some point.

In Hā‘iku, for example, an area that once had low numbers of coqui has now spilled over into a steep-sided gulch. Efforts have begun to remove coqui from the 225-acre area by applying a 12 to 16 percent solution of citric acid (a food additive). But challenging terrain and trying to work at night (when coqui are most active) have demanded the development of creative citric application tools. These include fixed-line sprinklers, high-volume sprayers and even limited use of a helicopter in inaccessible areas. Although daunting, successful control efforts over the last four years have shown that the key to preventing coqui from permanently establishing is early detection of new locations, repeated systematic treatment of known populations and removal of frog-friendly habitat.

Unfortunately, even the combined resources of state and county agencies on Hawai‘i, as well as regular outings by community-based coqui control groups, have been no match for the coqui.

On Maui, we only have one large population left. We still have a strong chance to become and remain coqui-free. Please help by calling the Maui Invasive Species Committee at 573-MISC (6472) if you happen to hear a coqui frog.

More information about the coqui-free program can be found at [www.coquifreemaui.org](http://www.coquifreemaui.org).

*\* Adam Radford is the vertebrate operations supervisor for the Maui Invasive Species Committee. He manages MISC's efforts to control invasive animals and banana bunchy top virus.*

<http://www.mauinews.com/page/content.detail/id/529537/A-most-unwanted-neighbor---coqui-frogs.html>