



## **Tailwind Jungle Lodge Sustainability Policy**

**San Pancho, Nayarit, Mexico  
Winter 2009-2010 Edition**

Tailwind Outdoor ([www.tailwindoutdoor.com](http://www.tailwindoutdoor.com)) is a young eco-lodge and adventure travel business on the Pacific coast of Mexico in the state of Nayarit, just north of Puerto Vallarta—one of the most popular tourist destinations in the world.

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## **TAILWIND MISSION**

The Tailwind mission is to foster a relationship between tourists, local people/community and the natural systems of the San Pancho coastline. We offer alternative vacations to adventurous travelers with strong environmental and sustainability values who are looking for a unique experience of outdoor living and exploration as well as community involvement and coastal adventure. At Tailwind we seek to strike a realistic balance between environmental, social and economic sustainability and to demonstrate the joy, comfort and affordability of low impact lifestyle. Every day Tailwind is proud to introduce new people to this unique area of recovering and old growth jungle. . . some of the last remaining wild jungle in North America.

## **TAILWIND COMMITMENT**

Tailwind is committed to adhering to all legal requirements—environmentally, socio-culturally, and economically—for the San Pancho region. Furthermore, Tailwind hopes to take this commitment to new levels, well beyond the basic requirements. Tailwind’s purpose is also to educate—our staff, our guests and local people about the importance of holistic sustainability.

Tailwind is committed to continual improvement. Tailwind enforces corrective and preventative management actions needed to ensure continuous improvement across all areas of our operations. These actions are continuously monitored, critically analyzed and revised.

The Tailwind Sustainability Policy is available to all Tailwind guests, employees and service providers and is available to the public online, at our website, [www.tailwindoutdoor.com](http://www.tailwindoutdoor.com)

## **TAILWIND HISTORY**

The inception of Tailwind Outdoor Co. has been a lengthy and challenging process for an American family with a true passion for everything outdoors, but with little experience in the tourism industry. In 2005, the Jacobi family invested in a 5-acre piece of jungle on the Pacific coast, 3 miles north of the quaint and charming town of San Francisco (nicknamed San Pancho, population < 3000). The Jacobi Family quickly fell in love with the jungle and we created a home for ourselves here. Since welcoming this relatively undisturbed piece of land into our lives, we have created the Tailwind dream—not only to be the guardians of this land, but to learn about it’s natural rhythms, to co-habitate harmoniously with its wild inhabitants, share it with the local peoples and visitors to the area, and to use it as a model for sustainable development. The development of Tailwind has been one of continuous challenges and victories, of a dream that was bigger than a budget, of naivety, of socio-cultural, environmental and economic frustrations. Far from perfect, after several years of working towards our dream Tailwind opened officially to guests for winter 07-08. At Tailwind every day is a new challenge and there is no end in sight to our learning curve. Perhaps the most important lesson that Tailwind has learned in these last few years and what has potentially become one of our greatest strengths as a business has been humility and open-mindedness. We have realized that anyone who thinks that they know exactly what sustainable tourism or development should look like is clearly only considering one aspect of

an extremely complex issue. Tailwind is convinced that there is no such thing as perfect sustainability, but rather, sustainability is a mosaic of concepts and ideas that, with a bit of effort, can come together to make our lives, the lives of others (beyond humans!), and the lives of the next generation happy, healthy and harmonious.

Tailwind Outdoor is located on an extremely unique stretch of coastline. Our jungle is some of the last remaining coastal jungle in North America. In recent years this area has attracted much attention—from vacationers, to resort developers, to Americans looking to build second homes. Consequently these invaluable wild places are at high risk. Tailwind has a tremendous opportunity to be a leader in sustainable development and to set the tone for the development of this area as we seek to integrate all aspects of sustainability—environmental, economic and socio-cultural—into our operations in order to lead this exquisite area of jungle coastline in a hopeful direction.

## **GREEN BUILDING PRACTICES**

### **I. PRE-CONSTRUCTION/EARLY DEVELOPMENT OF TAILWIND**

After purchasing this blank canvas of property, we spent a good amount of time wandering around on our land in the jungle *prior* building. Once a structure is built, it's extremely difficult to make structural adjustments (concrete is very permanent) so it was important to develop an understanding of the features of our land. In our development we paid attention to the following:

#### *Land Features*

The Tailwind property is an extremely steep slope, which we used very much to our advantage. Foresight prompted us to build a cistern and water catchment facility at the top of our land, allowing us to use a gravity feed system and save pumping and pressure tank energy. As well, we planned early on to locate our septic at the bottom of our property in order to avoid having to use pumps. It was very helpful to pay attention to location of septic systems, elevations, gravity and energy when considering where to place a septic and how the recycled grey water might be used.

#### *Water Routing*

Tailwind is very proud of our water catchment and grey water recycling system. Using the steepness of our land and the large amount of rainfall during the summer months, we designed a water collection and extensive grey water recycling system for our operations. Water is collected on several of our decks and 90% of grey water is recycled to the gardens.

#### *Wind and Light*

Spending time on our land and considering the weather patterns of the area allowed us to better understand the heating and cooling of the jungle. We knew that most of our units would be open and exposed to the elements, making wind patterns and sunlight considerable factors in the comfort of different locations on the property. For more on this see Appendix A.

#### *Local Knowledge*

Prior to building we made sure to speak with to neighbors and local peoples about building recommendations. It seems that generally what the locals are doing is being done for a reason, whether it be climate, cost, wildlife, etc. For example, our neighbors educated us on late night visitors—local animals known as Tejones (cotamundi

in English) who will eat any fruit left out and are able to open refrigerators. We were lucky enough to hear about this before building and arranged for our fridge to be in a locking closet. Some of our neighbors haven't been so lucky! As well, mildew was a lesson we learned from our neighbors—in the jungle, it's important to avoid concrete bed frames, no air circulation! Humid environments can be really challenging to keep mildew free.

During our design process we also considered what are the locals using to build with? We consulted with several builders and used a local Mexican builder throughout our construction. We quickly learned that American building standards are generally not suitable in Mexico, as most of the building materials are different. Most of the building materials used in this are more local, which makes them more inexpensive, which is good for a budget as well as in line with sustainable principles as there is less embodied energy involved in the materials. For more on local resources in building and aesthetics very practicality, see Appendix A, Vignette B.

### *Impact on the Land*

From the beginning we made every attempt to avoid leaving big scars on the land. Tailwind is a not an officially recognized natural preserve, but we feel that it is our responsibility to properly care for our 5 acres of wild habitat. In our construction we cut very few trees and built around trees where possible. We continually reminded our builder of the value of the natural flora (environmental protection is not yet a strong quality in Mexican builders). We also decided that in order to minimize our impact while building on a slope we would not dig deep into the hillside, as this would cause serious erosion. Instead, we had pillars put in that would serve as a foundation. This not only minimized erosion, but also gives our place a fun, tree house sort of feel! While considering our impact we also had to consider the lifespan of our buildings. This was a difficult consideration for us in our use of concrete, which is the primary building material for this area. Many old foundations can be seen around the jungle, where building projects were begun but were then deserted due to lack of funding or some other constraint. The concrete remnants will be there for a long, long, time. Concrete is a very permanent building product. Naturally, we want our structures to be durable, which will save energy and resources for rebuilding, but how long is too long lasting? We used concrete only where absolutely necessary and tried to use less permanent materials whenever possible.

## **II. BUILDING ON A BUDGET (good for the environment!)**

### *Built slowly as we could afford it.*

Tailwind's tight budget forced us to build slowly. This turned out to be a blessing, as it allowed us to learn from some of our mistakes—design flaws, water routing systems, flush toilets vs. composting toilets—issues with all of these things were addressed and improved throughout construction (and for future buildings).

### *Built simply.*

Tailwind's budget also forced us to build simply. This was also a blessing as simple structures have less material, which reduces environmental impact—saves energy (in manufacturing materials, transporting them and building techniques). Also, simple, practical structures with open air (no walls) really encourage people to focus on and to interact with/experience living in the jungle. The jungle is so beautiful in itself we are simply providing people with a place to be comfortable.

### III. THE BUILDING PROCESS

#### DESIGN

The Tailwind headquarters were carefully designed prior to building. Walter (nickname, Tiger) Jacobi, owner of the Tailwind property has worked as a builder/designer for 40 years and is the chief designer for Tailwind. Tiger put in countless hours of designing, adjusting and re-adjusting the designs of our bungalows to meet the needs of Tailwind. Tailwind was carefully designed not only with impact, water routing, passive heating/cooling, erosions control, road proximity, and other things, but also with careful attention to potential expansion in the future.

#### MATERIALS Break down

Throughout construction Tailwind attempted to use as many local resources as possible (for both economical and environmental reasons). In some cases we were able to use resources directly from our property, in other cases we had to source materials from other states in Mexico. Sourcing materials was very difficult at times as transparency and reliability of companies providing building materials can be questionable in this area. (See vignette #1 in Appendix A for more insight into the struggles of choosing building materials)

#### Foundations, Floors, Decks and Stairways

Concrete—We tried to minimize our use of concrete, which is an extremely permanent building material with high embodied energy (see Appendix A for more detail on concrete). However, in some cases, concrete is unavoidable. For our building on a steep slope and for catching rainwater on tile floors concrete was essential. 80% of our floors are concrete (tile finishing).

Rocks – used in bathrooms, stairs, floor detailing—all collected by us by hand from local beaches

Tile floors—local tile factory (20 miles, south just outside of Puerto Vallarta)

Wood floors—chiche, parrota both Mexican hardwoods. Parrota is from within this state (Nayarit), chiche from the state of Chiapas.

#### Roof Materials

Royal Palms – renewable, local palaperos for installations

Canvas Safari tents (were purchased by us personally from a factory in North Carolina)

Strangler Posts—from our land. These had fallen in a hurricane several years ago. We scouted them out and cut them appropriately to use to support our roves.

#### Walls

Bamboo- for the walls of our outhouse, bamboo from within 10 miles

Driftwood—for our shower walls, hand collected by us from beach within 10 miles, awesome building material!!

### Railings and Doors

Wooden Railings , some drift wood some unknown wood

Cuamecate vines—to tie railings, local sources, very renewable

Parrota— for doors, this is a local hardwood to Nayarit/Jalisco that is abundant in the area.

### **ELECTRICITY**

During the building process Tailwind faced the decision of whether to connect to the power grid or to go with solar power. Several considerations were involved in our decision: the orientation of our land, the cost of solar power, the cost of connecting to the grid, where the electricity off the grid comes from, what our electricity demands would be, what solar technology was available in Mexico, etc. After consideration of these factors, we chose to connect ourselves to the grid. Local belief seems to be that the grid power is hydropower coming from outside of Guadalajara, about 3 hours drive from here. The orientation of our land and all of our buildings is primarily northeast, though across from our buildings we do have a bit of southern exposure. Our largely shady location, as well as the seemingly high upfront costs of solar panels convinced us to connect to the grid. Unfortunately, we have ended up regretting this decision as it cost us upwards of \$10 000 (with many mysterious costs involved), to connect to the grid. In hindsight, we could have placed a small array of solar panels on our small bit of south facing land and this would have been more than sufficient to power our minimal electrical needs. Today our major electrical needs are from 15-20 CFL light bulbs, 1 washing machine, 1 large fridge and 2 small fridges. As we develop further we hope to install solar panels on the southwest facing section of our property.

### **WATER**

Also during the building process Tailwind had to decide whether or not to drill a well. The expense and tremendous impact of drilling, combined with the opportunity to take advantage of the significant summer rainfall in this area convinced us to catch rainwater and import water instead of drilling a well. The Tailwind headquarters is located on a very steep hillside. This factor has been used greatly in our favor, as we use no pumps for our water system—all of our taps, showers, toilets, etc. are gravity fed. This has saved us a tremendous amount of energy. In order to take advantage of the slope of the land we placed our cisterns at the very top of the hill. At this location we catch water on a rooftop deck and have our cisterns filled regularly throughout the winter. During the construction phase, all water lines were routed out of the cisterns and a grey water recycling system was simultaneously put in place using gravity feed. All of our grey water is recycled to the gardens.

## TAILWIND TODAY

After several years of careful construction, Tailwind was finally ready to be launched. Our bungalows were up and ready and we had established a fleet of sea kayaks and charted out some routes. In Dec. 07 we hosted our first guests and led our first tours, making winter 2007-08 our first official season in business. We are now in our second season, winter 08-09 and we are excited to have learned from many of the mistakes that we made last year!

### **I. ENVIRONMENTAL IMPACT**

Tailwind now measures and monitors our impact in all of the following environmental categories:

#### **Electricity**

As Tailwind does not use any renewable sources of energy, Tailwind has taken the minimalism approach to electricity. In our first season in operation, with a max capacity of 6-8 people, our total electrical bill was 2720 Kwh, which equated to approximately \$500 (US dollars). Our units have minimal electrical needs with basic lighting, few or no appliances, and energy efficient refrigerators. In our area of Mexico, if your electricity needs are minimal, then the cost of electricity is reduced, which is further incentive (beyond environmental reasons) to minimize electrical demands.

#### Electrical needs:

15-20 CFL lights, 1 washing machine, 1 large fridge, 2 small fridges, a pool pump, 2 on demand electric hot water shower heads, appliances include: 1 coffee maker, 1 blender and 1 toaster oven. (all in the main kitchen).

Demands/month (4-5 people avg.): 453 kwh/month

Energy saving techniques: Gravity fed water system(no pumps needed), no dryer (sun dried sheets, towels) max capacity loads of laundry, candlelight, headlamps, very small number of appliances (1 toaster oven, one blender, coffee maker), energy efficient and small sized refrigerators (3), use of CFL light bulbs.

Challenges: Sourcing our electricity can be difficult. We believe it to be from Guadalajara, but the reliability of the power company is quite faulty. CFL light bulbs in Mexico can be very pricey and it can be difficult to find light bulbs to fit our Mexican lamps and that are orange (to reduce attraction of insects).

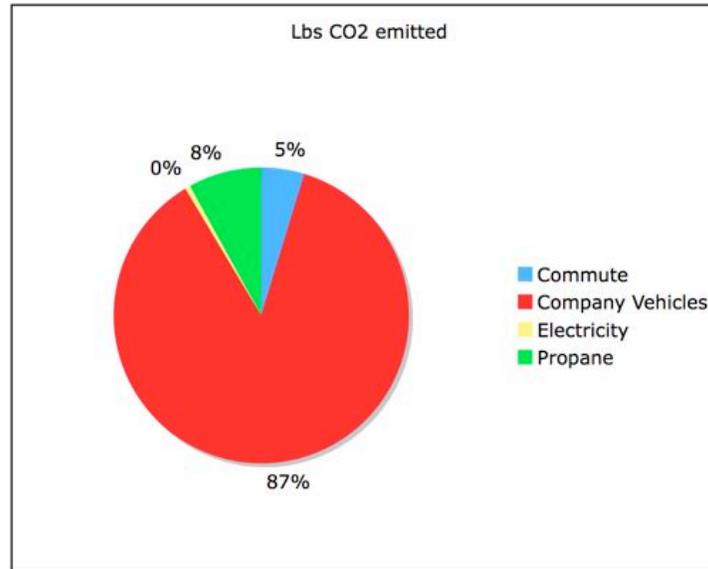
As Tailwind expands we hope to keep our electrical demands minimal by integrating more CFL lighting into our operations, educating our guests about electrical conservation, and maximize on natural lighting in further designs. We also aim to introduce solar panels on the southwest facing part of our land in the coming years.

#### ***Carbon Emission***

Carbon emissions are generated throughout the many aspects of our operations. We realize that our carbon emissions are an unavoidable reality, however, we seek to continually reduce our emissions (per person in our operations) in the years to come. While our most obvious emissions are generated from vehicle travel (the Tailwind staff drives to Mexico from m

Canada annually) other emissions are generated from commuting to sea kayak launching points, propane use, electrical use and part-time staff commuting.

The following is a break down of our carbon dioxide emissions. We emit approximately 9377 lbs CO<sub>2</sub> or 4.25 metric tonnes of CO<sub>2</sub> per year.



Clearly, our company vehicles are responsible for the greatest amount of greenhouse gas emissions, this is largely due to our long drive south to Mexico from Quebec every season. In the future we hope to reduce our emissions and will make every effort to maximize on number of errands taken care of on trips into Puerto Vallarta (1 trip per week if possible). However, we also realize that we can reduce a significant amount of carbon emissions through local purchasing—many of our purchases have hidden carbon dioxide emissions, which re-iterates the importance of buying local. As well, as we further develop our operations we hope to minimize the use of propane and introduce more solar to ease ourselves off the grid.

Of note, is that the carbon emissions of Tailwind guests—their travel to Mexico and their driving rental cars from airport to our eco-lodge (approximately 30 miles) and then driving around in exploration, are not included in our emissions calculations. Next season, Tailwind will consider offering guests the option of offsetting their travel and vacation emissions during their stay with Tailwind. This service will be offered through the Tailwind lodge and Sustainable Travel International.

### *Fuel- Gasoline and Propane*

We estimate that in our operations we use approximately 1 and 1/3 tanks of gasoline every week. This includes trips to San Pancho, Bucerias, La Peñita, Sayulita and Puerto Vallarta for food supplies, Internet service, hardwares, maintenance supplies for our property and car servicing/maintenance, as well as our sea kayaking tours. On average for our operations we

use approximately 20 gallons/week and for our tours we use 7.5–10 gallons, for a total of approx. 30 gallons of gasoline/week. We hope to reduce this amount of fuel use by maximizing on our trips into town (for example, 1 trip to Puerto Vallarta weekly).

Propane gas is used to power our stoves, oven and hot water heater. Collectively, across all of our bungalows, we have 3 stoves, 1 oven and 1 hot water heater. This year Tailwind has reusable propane tanks—1 large and 2 small tanks. Last year, we had only 1 tank, that holds 180 liters of propane, which we refilled only once over the 6 month period, making our propane usage approximately 200 liters for the Tailwind year (approximately 60 lbs of propane). This year we have added kitchenettes to 2 bungalows, which are both equipped with small propane tanks (15 liter tanks).

### *Chemicals/Products*

Throughout our development, Tailwind has been very conscientious of our use of natural products. We are acutely aware that all products we use inevitably end up running off into the jungle—whether it be through our grey water recycling system or through the torrential rains of the summer months when *everything* is washed away. We use biodegradable dish soaps, laundry soaps, house-cleaning products, and personal soaps. In our pre-arrival information that each Tailwind guest receives guests are told to bring their own biodegradable/natural soaps. For the first year of operation we relied on biodegradable soaps hand carried from the United States for the majority of our soap demands. However, slowly we are discovering places that carry Mexican biodegradable soaps. This year we will experiment with these new Mexican soaps—both laundry soaps and house-cleaning soaps. A local store in San Pancho has also started carrying personal biodegradable soap products. We also have a newly installed septic system that requires a natural bacteria solution that is added to the septic monthly.

We do have some use of non-natural products, these include lubricants for our kayak paddles, safari tent poles, etc. pool products (we do use chlorine as it is very difficult to keep a pool clean in the jungle, however our pool is very small), wood sealant (varnish, Thompson's Water seal) and bleach to remove the mold off many of our things after the wet and rainy summer months. *Please see Appendix B for quantification of Tailwind's soap use.*

### *Waste*

Tailwind has minimal non-compostable, non-recyclable waste. We are very excited about the new recycling facility in San Pancho (established in winter 2008), however, we are attempting to practice reduction and reuse *before* recycling. In Dec. 2008 we recycled approximately 42 % of our waste. This year we hope to further increase our recycled waste, as San Pancho now has a plastic, glass and paper recycling facility. In 2008 we also began composting organic materials. This was our first attempt at composting and our system has needed some adjustment (difficulties with nocturnal wildlife) and we could not do as much composting as we would like. Only 34 % of our waste was compost. This year, for the 2009 season we are transporting our compost to the San Pancho organic garden and we aim to increase our composting to 50 % of our waste. In 2008-09, our non-compostable, non-recyclable waste was approximately 24 % of our waste. Most of our trash comes from toilet paper and plastic bags. This year we will try to purchase single ply toilet paper and encourage our guests to use more mesh bags for grocery shopping. Our trash is collected

bi-weekly by the town of San Pancho. This year we will also do more research where the final destination of our garbage is. The lodge is working towards becoming a zero waste facility.

### *Water*

As mentioned above, Tailwind catches rainwater and recycles grey water. We pride ourselves on our water system and enjoy educating our guests on the use of biodegradable soaps and grey water recycling. In our first season, winter 07-08 the majority of our water consumption was non-potable water. The majority of our water usage in 2008 was for our dipping pools and for watering our gardens. This year we expect our non-potable water usage to drop, as we xeriscape our garden and do significantly less watering of the gardens as well as educate our guests on water conservation. Our non-potable water comes from water catchment as well as from water trucks that fill our cisterns (we have no well). In years to come and as we continue to develop Tailwind we will be expanding our water catchment system. We will also continue to use low flush and no flush toilets in our current and future developments, which significantly reduces our water demands. Last year, only 15 % of our non-potable water was from rainwater catchments and we certainly have more potential for catchment, as the rainy summer months yield 65-70 inches of rain from June through September (the rest of the year is dry). For more on Tailwind water systems and challenges, please see Appendix B.

We are able to easily separate potable water from non-potable as we rely on 5-gallon containers of purified water from the town of San Pancho for our drinking water. The amount of drinking water that we require per person is most likely to remain the same in years to come.

## II. COMMUNITY

### **Community Contribution/Involvement**

Tailwind annually donates 1% of its profits to local-non profits (Marine Turtle conservation and EntreAmigos, children/community center). The Tailwind staff also regularly donates time to volunteer projects in the San Pancho community. However, beyond time and money, Tailwind believes in connecting the local people with the natural wild habitat of this coastline. At every opportunity we invite local people to come and visit our headquarters and enjoy a meal or a conversation under the palms. We have annually hosted the local children, from after-school program run by the non-profit, EntreAmigos, for a hike on our jungle trails and a swim off the beach. Together, the Tailwind staff and the local kids hand painted wooden signs identifying the flora to create an interpretive nature trail on the Tailwind property. Through this process the local children were reconnected with the native landscape and educated about the flora and fauna. (See Vignette #4 about kid's education)

The Tailwind staff is also regularly involved in community events such as trash pick up days, spade and neuter clinics for stray animals, tree planting and fundraisers for EntreAmigos. Tailwind staff members have also volunteered in the local San Pancho organic garden. As a

fledgling eco-lodge Tailwind is just beginning to hire employees from outside the family. All new employees are from the town of San Pancho (3 miles from Tailwind) or from Sayulita (10 miles). This year we are excited to be merging some of our adventure tours with a local tour operator in San Pancho.

### **A Changing Community**

Over the last couple of years (since the purchase of the Tailwind property), there has been tremendous development in the San Pancho area. Tailwind itself is part of this development and we understand the popularity of this place and the sudden explosion of the tourism and vacation home industry. It has been with mixed emotions that Tailwind has watched the community of San Pancho grow—there have been both improvements (recycling center, community garden, non-profit for local kids and more) and setbacks (water shortages, septic management issues, congestion on narrow cobblestone streets and more) for the community. Knowing this growth trend, Tailwind aims to be a model for what sustainable development in the town of San Pancho can look like. Our doors are always open to new people to the area who are looking for building ideas and we hope to be a source of inspiration. *For a vignette on the quick development of San Pancho, see Appendix A.*

## **III. LOCALISM and ECONOMY**

### ***Employees and Service Providers***

Throughout our building process we have used local laborers, local materials providers and a local builder. For our first year in business, the Tailwind staff consisted of the Jacobi family and we did not hire on many outside employees. With our minimal budget, we have had to pour every ounce of energy we have into making the business stay afloat for the first year. However, as our operations have become more stable, we are beginning to hire on more part-employees. We currently have a local handy man, maid, and cook, all of which are from the town of San Pancho, which is within 3 miles of the Tailwind headquarters. We also use local service providers for water (truck loads come from La Peñita), and propane fuel (from Puerto Vallarta). We are also currently in the process of merging our tours (kayaking and hiking) with a local tour operator in the town of San Pancho (Diva tours). However, as we begin to hire on more employees for Tailwind we face the challenging predicament of being located down a very rough long dirt road that is very daunting for any local. *To read more about this see Appendix B.* As we expand it will be important to incorporate some sort of employee housing/caretaker's quarters on our property.

### ***Local Products***

Tailwind realizes the importance of developing the local San Pancho economy. Throughout the development of Tailwind we have relied upon local services (builders, building products, local workers, accounting services etc.) Local providers satisfy our (guests and staff) daily needs—our foods come from the grocery store, bakery, and community organic garden. We also direct guests to local restaurants, gift shops carrying goods from local artists, local art galleries and community events. We hope to soon display local art in our bungalows to promote local artists to our guests.

Tailwind donates 1% of our annual profits to local non-profits: EntreAmigos and the Turtle Protection Group.

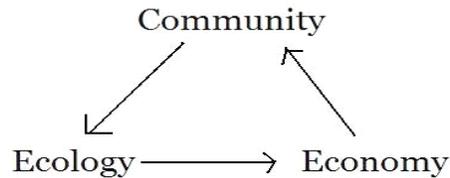
#### **IV. TAILWIND TOURS**

In addition to the bungalows and jungle headquarters of Tailwind Outdoor Co., we also offer adventure tours of this coastline. We have discovered that through our exploration of this area we have invaluable knowledge of the hidden secrets of this coastline. Furthermore, we realize that offering tours of this area of coastline is a fantastic way of connecting visitors (both Tailwind guests and visitors to the greater area) to the natural beauty of this place. Tailwind specializes in sea kayaking, which is a fairly novel concept in this region and has been extremely well received by visitors to the area. We also offer surfing, hiking and culture tours of the area surrounding San Pancho. We are strong advocates of human powered exploration and adventure. Sharing the natural beauties of this area is a gift for both the guide and the visitor.

As we continue to integrate sustainable practices into our operations, we will charge guests an extra dollar per tour to offset the carbon emission from the tour. As well, several of the kayaks we currently have in our fleet were manufactured by companies with sustainability policies (Sevylor). *To read more about the sustainability of our recreational equipment providers, see Appendix C.*

#### **TARGETS AND GOALS**

Tailwind is committed to continual improvement. The following are corrective and preventative management actions implemented to ensure continuous improvement across all areas of our operations. These actions are continuously monitored, critically analyzed and revised.



Tailwind is focused on continuous improvement across the 3 points of the triangle of holistic sustainability.

## I. ENVIRONMENTAL GOALS

Tailwind is continually attempting to introduce new methods into our operations that will reduce our environmental impact. Assessing and quantifying our impact has been a wonderful exercise for Tailwind and its staff. Some of the “low hanging fruit” that we will reach for in the very near future are:

### Water:

- Reduce water use by xeriscaping gardens, putting in more low-water flora that is native to the jungle (banana plants are excellent, low water plants).
- Use wash basins to wash dishes (makes water use for cleaning very obvious and increases ease of disbursement of water in gardens)
- Better educate our guests about the importance of minimal water use.

### Waste

- Toilet paper is one of our biggest sources of waste. We will purchase more single ply toilet paper and encourage people (staff and guests) to use on the toilet paper that they need.
- Improve our composting techniques, for both food compost and human waste. We aim to increase food composting to 50 % of waste.
- Further reduce our consumption of packaged goods and increase consumption of bulk items.
- Provide guests and staff with cloth bags for shopping in order to reduce the use of plastic bags— most garbage is plastic bags from the grocery store. Toilet paper, in Mexico, not deposited into toilet

### Energy/Propane

- Increase use of CFL light bulbs (replace lamps non-compatible with CFLs with CFL compatible lamps)
- Unplug refrigerators in occupied bungalows.
- Educate guests about energy conservation (turning off communal trail lights, toilet lights, etc.)

- ~ Turn propane tanks off when not in use to prevent leakage.
- ~ Educate guests on the importance of abbreviated showers for both energy and water conservation.

#### Chemicals:

- ~ reduce amount of chlorine used in pools and research potential of salt water pools
- ~ minimize use of bleach in cleaning
- ~ replace all cleaning products with natural products
- ~ find natural/biodegradable soaps from Mexico (near future)

#### Gas/Carbon Emissions

- ~ Maximize on trips into town (San Pancho, Sayulita, Puerto Vallarta). Minimize on number of trips, combine errands when possible.
- ~ Increase local purchasing to minimize the embodied energy of products consumed (reduce food travel miles)
- ~ Encourage guests to car pool into town or walk (if just into San Pancho).
- ~ Encourage guests to use public transportation (buses) into Puerto Vallarta instead of taxis.
- ~ Post a carbon emissions calculator and offsetting tool on the Tailwind website for guests to offset emissions.
- ~ Charge an extra dollar on tours and accommodations to offset carbon emissions.

Environmental goals down the road as we develop . . .

- ~ more composting toilets in future units, dispel composting toilet myths among guests
- ~ solar panels on south facing side of property
- ~ increase water catchments
- ~ keep our energy needs low as we expand
- ~ educate our new staff members on sustainability as we increase our staff
- ~ Expand planting efforts across the property to improve erosion control on this steep piece of land

## **II. COMMUNITY GOALS**

Tailwind considers itself a member of the community of San Pancho—a thriving and rich community of people, both local Mexicans as well as tourists and American x-pats. As we become more stable as a business and continue to expand we are committed to furthering our relationship with the community of San Pancho.

In the future we hope to:

- Further develop connection of locals to the jungle, host more frequent “kids in nature days” and continue to educate the local kids about sustainable lifestyle
- Have Tailwind staff increase their involvement with community projects—more volunteering in the community garden, town clean up days, tree planting days, etc.
- Introduce community open houses at the Tailwind headquarters; inviting local people to come and enjoy our place in the jungle for the day. Aim to have these frequently throughout the season.
- Host yoga classes in the jungle—a great way of bringing members of the community together

### III. ECONOMY

Over the last couple years the San Pancho economy has gone from sleepy to booming as the tourism industry has grown exponentially. Tailwind has been part of this wave of economic activity and we are proud to have used a local builder, local construction crew and local materials as much as possible throughout our construction. Today, in our operations we are trying to find a balance in our expenditures—keeping our purchases local, while fulfilling our operational needs but yet not prompting an over-development of San Pancho. We like to spread our expenditures across San Pancho, Sayulita, La Peñita, Bucerias and Puerto Vallarta and aim to frequent small Mexican owned businesses. In the years to come aim hope to:

#### Purchases

- ~ Stay out of Walmart! Buy in San Pancho or surrounding towns (Sayulita, La Peñita, Bucerias) whenever possible.
- ~ Increase use of organic towels, sheets, etc. in operations
- ~ Continue to support the San Pancho organic garden and purchase as much local organic produce as possible (for the Tailwind staff and for our guests).
- ~ Continue to source building materials in our constructions and buy local whenever possible, as well as encourage new industry in the area of environmentally friend products.

#### Ties to Local Businesses

- ~ Tailwind has prided itself on connecting with the owners of many local businesses. We hope to continue to develop Tailwind as a place to educate other business owners in San Pancho about sustainable operations
  - Open houses, cocktail parties, etc. with the focus of the event on sustainability
- ~ Use Tailwind as a show place for other developers in the area— as an example of how to build low impact.

#### Tailwind Staff

- ~ As we expand and Tailwind establishes its business presence we aim to employ more local people to add to our staff
- ~ Increase sustainability training for Part-time Staff
- ~ We will hold regular meetings/info sessions to educate our staff on the many aspects of Tailwinds operations and the importance of sustainability to our business.

## CONCLUSIONS

The 2008-2009 season is Tailwind's second year in business. Last year, our first year, we made many mistakes and learned a lot of valuable lessons. We are sure to continue to make mistakes, and Tailwind realizes that it has its imperfections. Regardless, we're proud to always be taking into consideration the triple bottom line and to be real people living and running a unique business in the Mexican jungle.

## Appendix A

### *The Building Process*

Poor decision: Our small dipping pool is located in a rather shady spot for most of the year. We do not heat our pool. In May the sunlight warms the pool to a lovely temperature. Sunlight is a wonderful, free, resource, consider your pool location! Also, with regards to pools, if you're committed to sustainable practices, research availability of eco-friendly pool products in your area *before* putting in a pool, finding pool products has been a real challenge for us in Mexico.

### **Vignette #1**

“Strangler fig posts are a beautiful and exotic way to hold up a palapa roof and they are the first thing that catches your eye when you walk into a space. The unique twisting vine around the palm is exquisite and native to this area. My father fell in love with these trees. Naturally, he wanted this in our main palapa. Problem? These trees are endangered, and over harvested. Solution? A hurricane had some through our area of coastline several years back and blew over many trees. We happen to have 5 acres of jungle . . . wandering around our land one day we noticed some downed strangler figs. Several days of tromping through the jungle scouting out strangler posts that weren’t rotten, we proudly announced to our builder that we had found what we needed for our strangler posts. Convincing our local builder, Adelberto (another old architectural dog) that it was worth hauling these massive logs up 100-200 feet up the steep slope was a challenge, but we now have beautiful strangler fig posts holding up the roof of our palapa.

### **Vignette #2**

Tamara’s story. “One of my biggest challenges as a member of the Tailwind crew is “teaching old dogs new tricks”. My father has been a builder/designer for his entire life and pays a lot of attention to the appearance of his works. My father carefully and skillfully designed all of the Tailwind structures, with me continually whispering “local” and “ecological” in his ear. It can be challenging balancing ecological and local with architecture, but it can be beautiful. (Can a composting be beautiful? This was a tough one, more on this later.) We hope to have found this, but it did not come easily. I think that perhaps, through persistence, I have taught my father that sustainable is a beautiful thing!”

### **Vignette #3- San Pancho Development**

Upon arriving in San Pancho in 2005 the Jacobi Family (founders of Tailwind), were some of the only blonde people (non-Mexican) in San Pancho. Tourism was only just beginning in this area of the Pacific coastline. In only a few short years, things have changed significantly as the real estate market in the area has more than tripled in value and continues to increase. Almost overnight the penniless local who gave the family our first surf lesson turned into a millionaire with a successful real estate company (Emerald Coast) that has molded the character of San Pancho.

### **Vignette #4—Kids Education**

Turtles along this coastline are protected. A couple of years ago there was an issue with the locals eating the turtle eggs and preventing turtle repopulation. A local non-profit for turtle protection started an effort to educate the kids about the endangered turtles and why they shouldn’t eat turtles eggs. Soon, there was no more problem with locals eating the eggs because the kids went home and refused to eat the turtle eggs that their parents had illegally collected.

### **Concrete**

The embodied energy of cement production is very high, though Cemex, nationally owned cement company. This was our prevailing building material. In Mexico it seems that the solution to every building problem is cement. Our biggest building impact was concrete. On one hand, our concrete foundation will be around for many generations to come so more resources will not have to be used to replace our foundations in years to come. On the other hand concrete lasts a VERY long time and our structures will remain evident in the jungle for many centuries.

### **What is Local and is it good?**

However, upon significant consideration, we have concluded that “local” is an extremely abstract term. Throughout our development we have consistently attempted to purchase products from the community of San Pancho, 3 km from the Tailwind headquarters.

However, while purchasing products from San Pancho is a good thing for the local economy, it does not mean that these products are necessarily coming from San Pancho, therefore should they be considered local? The embodied energy involved in the manufacturing, transportation, etc. of the products we have consumed and require in the development and maintenance of Tailwind operations is undeniably quite high despite our efforts to use local resources. So, a question we continue to ponder is—How far can you go with local? Furthermore, how far should local go . . . there is a risk of communities over-developing and developing much too quickly (as demonstrated by the town of Sayulita, just south of San Pancho). Pumping too much money into a small community can also endanger the surrounding natural environment, which is certainly a factor for San Pancho. *For further discussion on Tailwind localism and to see a breakdown of Tailwind purchases please see Appendix A.*

With globalization, the local vs. organic debate., and the presence of Walmart in Puerto Vallarta, it was challenging for us to decide which products to choose—Organic cotton sheets brought from Canada, bio-degradable soaps and cleaning products brought from USA, not available in local community, local is good, but only to an extent . . .

**Distance to Puerto Vallarta:** 40 Km south of San Pancho

**Distance to Bucerias:** 20 km south

**Distance to Sayulita:** 5 km south san Pancho

**Distance to La Peñita:** 15 km north

**Distance to San Pancho from the jungle:** 3km

### **Is Local always a Good Thing?**

Leakage is significant problem in the small town of San Pancho where many Americans settling. Due to old American habits, many of their purchases are made at Walmart (nearby in Puerto Vallarta). This detracts from the business that local San Pancho businesses might benefit from.

However, on the other end of the spectrum, an important question to consider is; as San Pancho continues to grow rapidly, should all \$\$\$ stay in San Pancho, is growth a good thing in an endangered area??? Do we want more commercial services offered in this town and continue the expansion of the town into the jungle? (as well as potentially increase plundering of local resources). This changes the nature of the community and local wilderness. It would bring prosperity, but increases impact. San Pancho seems to be growing too quickly to be sustainable.

### **Sustainable vs. Local Debate**

As a proponent of sustainable living, I am acutely aware of the tremendous role of dietary habits in overall impact. While reduction in food miles can significantly reduce impact, agricultural techniques in this area of Mexico can be incredibly destructive and unsustainable (acres of jungle cleared, tons of fertilizer used, and scarce water excessively distributed. Is it possible to strike a balance with this? I struggled with this question until this year, when a local developer looking to improve its reputation as a strong community player, established an organic garden in the middle of town. This has been an invaluable addition to the community. **I would strongly recommend to any sustainable tourism provider to**

**invest time, money and energy into community organic gardens to provide food for locals and visitors—tasty food which can be traced directly to its origin. The San Pancho organic garden is a model for developing towns..** The food coming out of the garden is also an opportunity to educate local farmers as well as visitors to the area. I serve local organic vegetables (amazing lettuce!), fresh papayas off the trees on our land, and local breads and tortillas from the San Pancho bakeries on many of my sea kayaking and surfing tours. Lunchtime is a highlight of the tour!

On a side note, we tended to stay away from seafood because of the expense, as well as the mystery of endangered seafood. This was a shame because ocean vacationers always ask for seafood! The tragedy of the fisheries is a tough one.

## Appendix B

### Water cont.

Water catchments and filtration systems. In the eco-design industry there is a need easy designs for water catchments—accessible and understandable!!! New concepts to developing world, local builder skeptical, old habits die hard.

Tailwind doesn't have enough water catchment to accommodate our needs throughout the year. Our cisterns supply us with a couple of months worth of water, then we have water trucked out from a neighboring town (who knows where the water comes from before that!). We need badly to expand our water collection system, but are at a loss for a design.

There is a serious need for water monitoring in the community of San Pancho. No water monitors available. No awareness among the locals. City water supply runs low for the last couple of months before the rainy season. As the San Pancho population continues to rise, this situation will only worsen.

Grey water system . . . AWESOME!!! Worked incredibly well.

### Soap

Issue: Source for natural soaps, none available in town? Hand carried down from USA by visitors and by Tailwind staff. Hopes of eventually recovering the old industry in San Pancho: soap from oil palms, currently not happening, undercapitalization.

<b>Biodegradable Products</b>	<b>Quantity/month</b>	<b>6 months</b>
Dish soap	16 ounces	96 ounces
Cleaning products	1/3 gallon	2 gallons
laundry soap	3/4 gallon	4.5 gallons
Personal soaps	75-200 ounces	137.5 ounces
Septic Additives	3 ounces	18 ounces
<b>Non-Biodegradable</b>	<b>Quantity/month</b>	<b>6 months</b>
Lubricants	1 ounces	6 ounces

Pool products	1 gallon	5 gallons
Wood sealant, varnish	Nov. and April	5 gallons
Bleach	1/6 gallon	1 gallon

## Service

How to determine fair *rates and wages* appropriate to the community and type of business?

Tailwind is the first eco-lodge of its kind in this area of coastline. We created a new category for this area. What is this experience worth? There is no easy answer to the rate setting question, but this was a challenge for us with our accommodations, our tours, and all services that were novel to the area. What is the premium on sustainable business? What are travelers “willing to pay” for sustainability on their holiday? We are still working on our rates and have yet to decide on what is appropriate. It’s extremely challenging to run cost analysis for this type of business.

What is a fair wage for a local worker in this new sort of business? American are pushing up prices in the community significantly, the cost of living is increasing, how will wages change to match this?

## Employees and the Commute to Tailwind

As Tailwind expands and considers employing local people we are faced with two large challenges—getting the workers to our land and establishing fair wages for these workers. The Tailwind headquarters is located down a 3 mile long rough, steep and narrow dirt road. The vehicles you see on this road are 4x4s, 4 wheelers and beaten up rental cars. Local peoples typically avoid this road as it is a recipe for definite mechanical issues. This poses more financial problems for the locals who might consider working with us, as well as a challenge for us, in finding locals who would be willing! Not only that, but there’s no gas station in San Pancho, the closest fuel source is a 20 minute drive away. For the moment we are stuck, as it seems that we need to provide transport for our workers. Yet, our budget cannot yet accommodate this. Any suggestions?

## Appendix C

### Recreational Equipment Providers

Unfortunately, there is a considerable lack of environmentally conscious recreational equipment providers. Particularly with sea kayaks, Tailwind has done a bit of research on what types of sustainability considerations various sea kayak manufacturing companies took into account and was very disappointed. It would be wonderful in the future to promote the use of sustainably manufactured equipment in tours—surfboards, sea kayaks, and mountain bikes.

There is also great need for attention to environmental awareness among the surfing crowd. Both local and visiting surfers need to be educated about the impact that they have on these natural places. There is need for attention to the surfing tourism industry.

## Appendix D

Green Travel Myths

## Appendix E

## Long Run Increased Profitability

Since the beginning of Tailwind one of the greater challenges has been understanding a higher expense initially for more long run increased profitability. The initial, start up costs, doing things right the first time can be expensive. But retrofitting is more expensive! For example, designing for water catchments, solar power, composting toilets, and low flush toilets. All these may be seen as risky, unreliable and, may be more expensive initially. However, we've quickly discovered that these things do work and will definitely pay themselves off! Initial costs were very discouraging for us and our tight budget and in some cases prevented us at Tailwind from doing things the right way the first time around. We continue to develop we will run more cost-benefit analysis and understand the value of long run profits.

## Miscellaneous

### Myth BUSTERS

- 1) Myth: Green or sustainable vacations are expensive.

Reality: Ecologically conscious resorts are not all more expensive. Green Travel companies promoting "Eco-chique"—a fashionable, luxurious type of tourism—can be expensive, but there really is a wide variety of options outside of this type of vacation.

**Responsible tours and accommodations come in a range of prices, depending on the level of comfort and convenience you desire.**

- 2) Myth: Green or sustainable vacations require a sacrifice of quality, luxury, etc.

Reality: No, you will not have to endure cold water showers and dirty floors! Actually, organic sheets and towels are an ultra soft experience that is not to be missed!

**Many lodges, hotels, and tourist services have very high standards for quality and luxury. They bring nature and culture within your reach, while still assuring your level of comfort.**

- 3) Myth: You have to be an extreme environmentalist, a hippie or a minimalist backpacker to enjoy a green or sustainable vacation.

Reality: No, green vacations come in many forms. Sustainable vacationing can involve anything from adventure and wildness to luxury and fine dining! There's something for everyone.

**People of all interests, ages, incomes, and backgrounds can travel responsibly, and there are plenty of family-friendly options.**

- 4) Myth: Being a responsible traveler is a large hassle that is much too difficult and time consuming.

Reality: There are many are many green travel services and information sources available immediately at your fingertips. Check out STP's eco-directory!

**The internet and green travel guides make it fun and easy to plan and book responsible travel.**

5) Myth: Green means sustainable, all eco-lodges and eco-conscious tour companies are perfectly sustainable and sustainable tour companies are always true to their word.

Reality: Be aware that the term, eco-lodge or eco-tour are trendy, catchy terms that may not reflect genuinely sustainable or green practices. Green tourism focuses on environmental practices, whereas sustainable tourism is a combination of environmentally, socially or economically conscientious practices that can take many different forms. Tour companies may incorporate a spectrum of green of sustainable practices into their services. Be aware of shallow green tourism that is a popular marketing strategy. However, even the most devoted sustainable tourism companies will never be perfectly sustainable as there is really no such thing. There is always room for improvement. Feel free to ask questions, closely observe, and be sure to not assume that a sustainable travel company is doing everything they say or appear to be doing.

**There is no such thing as “perfectly” sustainable and there are many different degrees of sustainable tourism.**

6) Myth: Eco-lodges and green tour services are in the wilderness and far from populated areas.

Reality: Certainly, there are plenty of eco-lodges in the jungle. But, a sustainable hotel or tour company can be located in towns or cities where there's plenty of action, nightlife and urban attractions.

**Eco-tourism doesn't mean the middle of nowhere!**

7) Myth: Vacationing that involves any kind of air travel cannot possibly be sustainable.

Reality: It's true that renewable energy powered jets will not yet whisk you away to your foreign vacation. However, there are ways that you can compensate for carbon emitted during your flight. There are many types of carbon offsetting that can help you improve the sustainability of your travel and guide sustainable development around the world. It's quick, easy and fun deciding which carbon offsetting project you will fund! Check out STP's carbon offsetting programs.

**New carbon offsetting programs can help you minimize and compensate for the carbon emissions of your travel experiences.**

8) Myth: If you're not staying in a green hotel, and you're not participating in any “green” tours, attractions, etc. you can't possibly be a sustainable traveler. Being a sustainable traveler is all or nothing.

Reality: Don't get overwhelmed, enjoy your vacation, but be conscientious. Focus on the little things that can make your travels more sustainable. Don't worry about treating yourself—buy local in the morning and then treat yourself to a boat tour, no one is perfect!

**There are many little things you can do while on holiday that can add up to a big difference. Source: [www.realsimple.com](http://www.realsimple.com)**

A) Go paperless with your travel itineraries and guides. Save a tree — and your back — by downloading travel guides, maps, and even boarding passes onto a handheld device. Lonely Planet sells travel content in “Pick & Mix Chapters” downloads, allowing you to buy only the

information you need and view it on your PDA, and Rough Guides provides free downloads of cultural audio “iTours” for iPods. On domestic flights, Air Canada offers paperless tickets featuring scannable electronic bar codes that are sent to your cell phone or PDA. Continental Airlines is currently testing this technology.

b) Streamline your suitcase. Even 10 extra pounds per passenger translates into the need for extra fuel, which can then lead to more carbon dioxide emissions. Pack light.

c) Towel off twice. Use only the towels you need, hang them to dry, then reuse. Likewise, why have your sheets changed every day? Leave a note for housekeeping to skip changing the sheets and towels. Opting to use them again can save up to 30 gallons of water a day.

d) Bring your own natural soaps. Carry your own amenities in reusable travel containers. Bring biodegradable (not just organic!) soaps that will break down quickly in the area you are visiting, so as not to leave a long impact. If you open one of theirs, toss it in your bag to be finished off at home and refilled for future trips. Hotel soaps and bottles of shampoo, conditioner, and lotion that have been opened — even if just for one use — are routinely tossed in the trash.

e) Eat locally. An American meal involves food flown in from, on average, five different countries, according to the Natural Resources Defense Council. Minimize food-transport pollution by choosing a restaurant that utilizes regional ingredients.

f) Drink locally. If the tap water is safe, go ahead and drink it. According to the Environmental Protection Agency, while public water gets tested for contaminants thousands of times a year, bottled-water facilities may not test their products as frequently. Plus, a discarded plastic bottle can take years to biodegrade.

g) Too far to walk? Hop on a bus or the subway. Most cities’ transportation-authority websites have a route-planner function; also try [www.hopstop.com](http://www.hopstop.com) or [www.subwaynavigator.com](http://www.subwaynavigator.com). If your trip requires a car, rent a hybrid (choose “hybrid” under “car options” at [www.kayak.com](http://www.kayak.com)) to reduce emissions by up to one-half. The next best option? Find a “green” car at [www.hybrids.orbitz.com](http://www.hybrids.orbitz.com).