

Guide to Modern Wagon Travel

*A Complete Guide on How to Live and Travel by
Horse and Wagon in a Modern World*



by Bob Skelding

Guide to Modern Wagon Travel

*A Complete Guide on How to Live and Travel
By Horse and Wagon in a Modern World*

Wagonteamster.com

Wagonteamster Publishing
41605 County Road G
Del Norte, CO 81132
www.wagontemaster.com
email: bob@wagonteamster.com

Copyright © 2011, by Bob Skelding.

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic, mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the author, except for inclusion of brief quotations for review.

Photographs by Bob Skelding, unless otherwise noted.

Dedication

This book is dedicated to teamsters.

Table of Contents

| | |
|---|----|
| <i>Chapter 1- A Day's Journey</i> | 2 |
| <i>Chapter 2 - Preparations</i> | 9 |
| Making the Decision to Go For It | 9 |
| Like a Steely-Eyed Missile | 9 |
| Constructing a Wagon and Choosing a Team..... | 11 |
| Training a Team for the Road..... | 13 |
| Choosing a Route | 13 |
| Financial Preparations..... | 14 |
| Psychological Preparations | 14 |
| Skills to Be Learned..... | 15 |
| <i>Chapter 3 - The Wagon</i> | 16 |
| Wagon Size | 16 |
| Wagon Gear | 17 |
| Brakes | 18 |
| Pulling Rig | 19 |
| Wagon Box | 21 |
| Building a Wagon From Scratch..... | 22 |
| Hot and Cold Water | 24 |
| Electric Power..... | 26 |
| Heating..... | 28 |
| Driving Compartment | 28 |
| Warning Devices..... | 29 |
| Headlamps..... | 31 |
| Electric Fence System..... | 32 |
| Buying a Wagon That's Already Made | 32 |
| Fitting a Lightweight Camper to a Wagon Gear..... | 33 |
| <i>Chapter 4- The Team</i> | 35 |
| Finding a Team | 35 |
| The Making Of a Horseman | 37 |
| Halters and Lead Ropes | 41 |

| | |
|--|----|
| Tying a Horse..... | 42 |
| Harnesses and Harnessing..... | 42 |
| Driving | 44 |
| <i>Single Horse</i> | 45 |
| <i>Team of Two</i> | 47 |
| <i>Three Abreast</i> | 49 |
| <i>Unicorn Hitch – (Two at the Wheel and one Lead Horse)</i> | 50 |
| <i>Four Abreast</i> | 51 |
| <i>Four-Up</i> | 52 |
| <i>Larger Teams</i> | 54 |
| <i>The Holdback</i> | 55 |
| <i>Preventing Runaways</i> | 56 |
| <i>Scary Things</i> | 56 |
| Caring For the Team | 57 |
| Watering, Mineral and Cooling Down..... | 58 |
| Feeding and Rest..... | 58 |
| Brushing/Currying | 61 |
| Hoof Care..... | 61 |
| Blankets and Shelter | 61 |
| Shots/Coggins Tests/Health Certificates..... | 62 |
| Preventing Lameness | 62 |
| Veterinary Care | 64 |
| Preventing Sores | 65 |
| Shoes and Shoeing | 66 |
| Horseshoeing..... | 67 |
| Grazing Horses..... | 74 |
| Interacting With the Public | 77 |
| Horse Training | 79 |
| Round Pen Training | 79 |
| Ground Work, With a Lead Rope | 83 |
| Obedience Training While Hitched Up | 84 |
| Desensitizing..... | 85 |
| <i>Chapter 5 - Road Travel</i> | 86 |
| Safety | 86 |
| Road Grades - Up Hill | 87 |
| Road Grades - Down Hill | 89 |
| Shoulders and Rumble Strips..... | 90 |
| Bridges, River and Rail Crossings | 91 |
| Cities | 93 |

| | |
|---|------------|
| Traffic | 95 |
| Back roads versus highways | 95 |
| How Far to Travel..... | 96 |
| Rest for the Team..... | 97 |
| Supplies..... | 97 |
| Meeting People | 101 |
| Finding a Place to Camp | 102 |
| Donations and Folks Wishing to Help | 104 |
| Good People/Bad People | 105 |
| Dealing with Law Enforcement..... | 106 |
| Media Coverage | 106 |
| Blogging..... | 107 |
| | |
| <i>Chapter 6 - Stories of the Road.....</i> | <i>109</i> |
| | |
| Cavendish, Vermont | 110 |
| Two Schools in One Day | 119 |
| The Amish of Farmers, Indiana | 124 |
| Mighty Miss to Little Miss Prodigy..... | 130 |
| Slick Rock Hill..... | 141 |
| High Altitude Horses | 152 |

Guide to Modern Wagon Travel

Introduction

There are few things as enjoyable as journeying by a horse-drawn wagon. I've written this book to assist those that wish to pursue travel in this fashion. Much of what I've learned about wagon travel has been through the school of hard knocks, painfully gathered in 6000 miles of travel by horse and wagon. Our forefathers dealt with many of these issues on a day to day basis, but much of what they once knew has been lost throughout time. Whether you intend on taking a long haul trip, only a weekend excursion, or just reading about what it takes, I'm sure you'll enjoy this book.



There are few things in this world that can bring more joy than that felt when traveling by horse and wagon.

Chapter 1- A Day's Journey

In the pre-dawn darkness of the wagon, I slowly climbed the stairs from a dead sleep to being fully awake. As consciousness returned, my ears were attuned for any noise that might indicate that there was a problem with the team of horses, penned for the night in portable electric fence, adjacent to the wagon. A stamping foot and a soft snort from a horse's nose revealed that all was well.

My initial concerns with the welfare of the team satisfied, I relaxed back into a semi-drowsy state and turned my thoughts to where I was and what I expected the day to bring. After deciding to completely remake my life to one of my own choosing, I was now traveling around America by horse and wagon. The wagon was equipped as a small recreational vehicle, with enough amenities to allow me to travel with a degree of comfort. The one Percheron and two Belgian draft horses were the motive power to pull my contraption down the road. I didn't need expensive purchases of gasoline or automobile repairs, only a small amount of hay and grain to offset the free grass the horses were munching along the way. Life at three miles an hour was much different than one zooming by at sixty. I had a opportunity to not only really see the country through which I traveled, there was also a much better chance to meet the people that occupied this great land.

I turned by thoughts to where I was and what I expected the day to bring. I was just a few miles east of the town of Dulce, New Mexico, located on the Jicarilla Apache Indian Reservation. I was on my way to the San Luis Valley of Colorado. The highways in most western states have large right of ways, often extending a 100 feet or more on each side of the road bed. To me, this represented an excellent place to camp with the horses. With large roadside camping spots available everywhere, I didn't have to take the time to try and find a place with a host. I also had a lot of free pasture. As the wagon and accompanying trailer carried a two day supply of water, a portable electric fence and a solar panel to

produce electrical power, I was fairly self-sufficient and had the luxury of camping where I wanted.

My plan for the day was to head down the road towards Chama, NM, about 20 miles away. I didn't know how the day was going to turn out; only that it was going to be a good day, one that I would truly enjoy.

With a sigh, I threw off the covers, lit the stove burner under the coffee pot then got dressed. When traveling with horses, their care and well-being always took precedence over my own. So my first chore in the morning was to see to their water and grain. Grabbing a large plastic jug from the trailer, I topped off the rubber tub full of water in their temporary paddock. From a sack of oats, I measured about five pounds of oats into each of three separate pans and set them inside the electric fence. Their immediate needs seen to, I went back into the wagon to see to my own.

With both a commode and a sink in the wagon, it was easy to see to personal hygiene. While the coffee was perking, I set about converting the bed back into a table and bench seats. Bacon and eggs were frying in the pan as I sipped my morning coffee. By the time breakfast was over it was time to go back outside and harness the team and break camp.

After turning off the electric fence controller, mounted on the rear of the wagon, I pulled the horses out of the enclosure and tied them to the side of the wagon and trailer. Once it was empty, it only took about ten minutes to dismantle the electric fence and store it away. Picking up a brush, I started down the line, brushing each of the horses and checking them for sores. Finding a new collar rub on one of the Belgians, I doctored it with a dab of gall save. Picking up each of their feet, I used a pick to clean their hooves and check for loose horse shoes. 'Hmm', I thought as I picked up Bill's front feet, 'These shoes are getting a little worn. I'll have to leave myself enough time to re-shoe him tonight.'

It took about 20 minutes to harness the two horses I was driving for the day. Bob and Bill, the 2000 pound, red Belgians would be working today, while my gray Percheron, Doc, would get some rest as he walked behind the trailer on a lead rope. Driving the Belgians to the

front of the wagon, they stood quietly while I snapped them into the neck yoke on the front of the wagon tongue then connected their heel chains to the evener.

With a, “Get up there”, they leaned into their collars and started pulling the wagon up a small incline and on to the road. Shortly after we got underway, their morning oats digested into sugar, resulting in a burst of energy and a slow trot down the road.

We weren’t a mile down the road when an old blue Chevy pulled over on the shoulder in front of me. As I stopped the team behind the car, two Native American ladies walked back and handed me a package of cookies and a bottle of water. “We thought you might be hungry and would like a little snack”, one said.

Thanking them profusely for their warm gesture, I thought to myself, ‘Now that was really nice. This is starting off to be a great day.’”

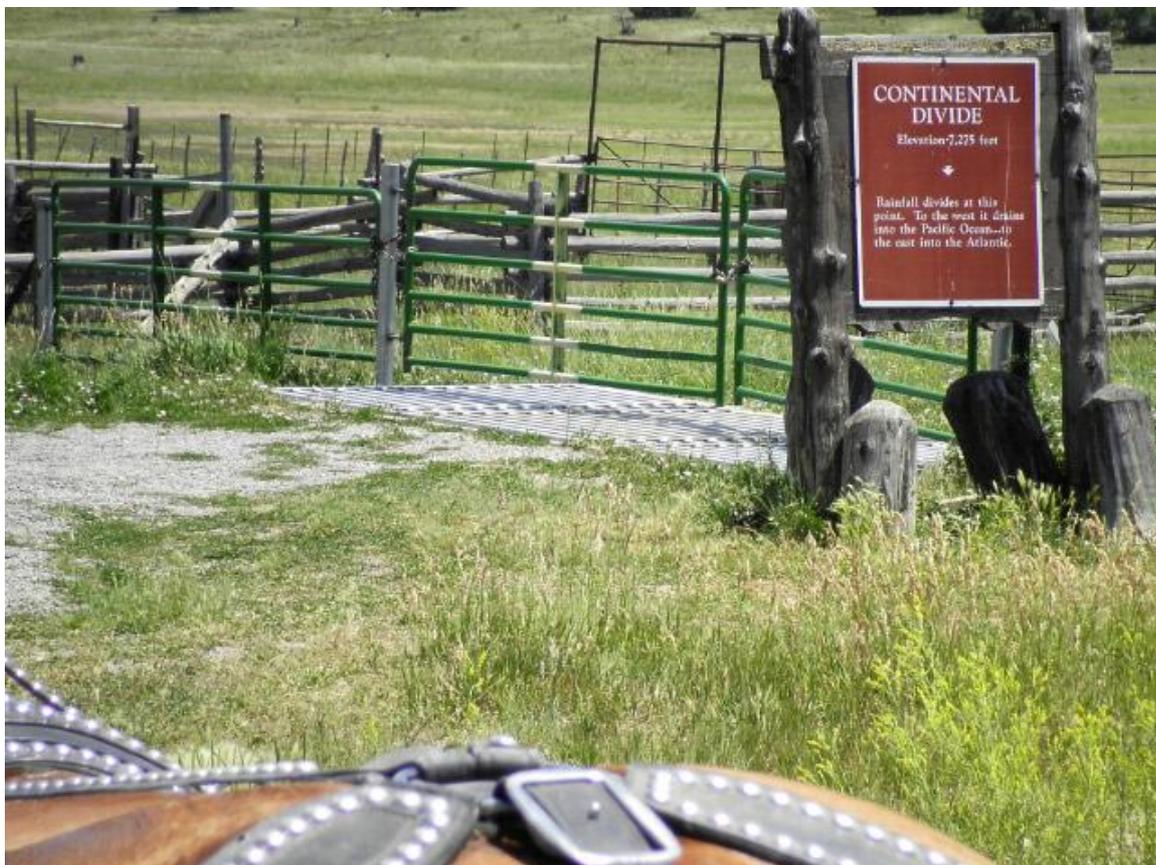
I was about to pull back on to the road when a pickup truck pulled in where the two ladies had just exited. A young Jicarilla man walked up to the wagon and excitedly said, “I saw you pulling the wagon full of kids in the parade the other day, and I just wanted to stop and see if there’s anything you need. Would you like me to drive behind you and warn all of the cars?”

“No thank you”, I replied. “It’s much safe if I travel without an escort. That way, cars only have to pass the wagon and horses and not a truck as well”.

In the next two hours I was stopped by at least four more cars. Twice little kids got out to meet and pet the horses. By the time I stopped the team for their morning break, I was feeling pretty good. I heated up the morning coffee, but it didn’t leave me near as warm inside as all of the wonderful people I had met in the past couple of hours.

We were slowly gaining altitude and the hillsides were starting to be covered with thick stands of pines and aspen. Interspersed between the trees were large areas covered with thick grass. A high ridgeline

dominated the northern side of the road, while the land fell off in rolling hills to the south. About an hour before lunch, we climbed a small saddle and once more crossed the Continental Divide, this time headed east.



Back across the Continental Divide

Around noon, I pulled over on a wide spot on the shoulder for lunch. When traveling with the horses I always water and grain the team at midday. After eating they get a chance for a little nap before we move out for the afternoon.

While the lads were munching their oats, I poured myself a cocktail and started putting together lunch. On this day, I was having leftover steak, potatoes and green beans from the night before. As I was sitting up front, eating my lunch and sipping a drink, I thought about how our hurry-up society had corrupted the lunch hour. In the not too distant

pass, most people would take a full hour for lunch, using the time to consume a good meal, have a glass of beer and socialize with their coworkers. In the time-is-money world of today, that civilized habit was mostly a thing of the past. One of the nice things about the wagon, is that I didn't set much store with the opinions and policies of the corporate world!

The boys were still sleepy when I picked up their feed pans and put on their bridles. After we were hitched up and underway, we settled in for the afternoon walk. I started digesting my food a little sooner than the horses, as I immediately felt a little drowsy. For the first fifteen minutes after lunch, I found myself nodding off. This might sound a little dangerous, but it's really not. I drive with a constant pressure of about ten pounds on each of the driving lines. Unlike a riding horse, a team is driven with a live bit, where the teamster can actually feel the pressure of the bits in the horse's mouth through the lines. If the lads turn their heads or start drifting left or right I feel it in my hands and instantly pop out of my drowsy state. I don't recommend trying this technique in a car when you're driving down the road!

After about fifteen minutes of this, two things happened simultaneously; I worked through my drowsy state and the horses' blood sugar kicked in as they began to digest their lunchtime oats. For the next hour or two, we set a good pace as they started - 'picking them up and laying them down'.

About every hour I pulled over to give them a ten minute break. It doesn't take long for a team to become adjusted to this. They quickly learn to utilize the time to take a little catnap. This is exactly how they operate in a natural state - they'll graze and socialize, then take a nap; then repeat the cycle all day long.

The road shoulders were narrow here, so I didn't get near as many car loads of people stopping to say 'hi'. Only two vehicles stopped to visit. This doesn't count a dozen cars that slowed down so people could take pictures.

About 4 pm, I had twenty miles behind me and was approaching

the town of Chama, NM. Every few days I like to camp in a civilized location, so I pulled the team over and went in to talk to the owner of the Rocky Mountain Mini Mart. Having previously spotted a nice paddock of tall grass behind the station, I was about to ask him if he had a place I could turn the horses out on for the night, when he interrupted me and asked if I would like a place to stay. Never one to ‘look a gift horse in the mouth’, I readily agreed.

Herman, the owner, had a guest staying with him from Tyler, TX. The guest and his father Jim had been following my travels ever since I drove through Tyler the previous winter. After his friend extolled all my virtues on Herman, he asked me to turn the team out back and join him and his family for some home cooked Mexican chili and red beans. Now, the best Mexican food in the world is made in New Mexico. And, the very best Mexican food is homemade. So, even when warned that the food would be pretty spicy, I readily accepted the invitation.



Jim Cunningham with the team in front of the Rocky Mountain Mini Mart

What followed was a very nice evening, with yet another great American family. Time and time again I would find myself a guest of some great people that would treat me as their very own. After three years and 6000 miles of travel around this great country, I was continuously rediscovering that the vast majority of people in the world are good, kind and generous. Unlike what is reported on the evening news, evil is actually a rare thing. It does exist, but in all my years of travel, I have yet to encounter it.

When I drifted off to sleep that night, my heart was warmed by the people I had met that day; the horses were mowing down a thick stand of grass, and my belly was full from the best Mexican chow I had ever ate. 'Rags to Riches' was supposed to be a once in a lifetime tale; I seemed to be experiencing it nearly every day.

Chapter 2 - Preparations

Making the Decision to Go For It

In my journeys, I've met and become close friends with several wagon travelers. Most of these people have undergone a life-changing event that has left them with an opportunity to remake their life into something different. The life-changing events include; recovering from a severe illness, loss of job or home, or a mid-life crisis. When I compare myself to all of these events, I can only say, "Hey, I resemble that remark."

Only a few times in a man's life is he given an opportunity to do things over. He or she can choose one of three paths to take; do nothing and let the opportunity pass, partially redo their life, or make it a complete 'do-over' and completely change their life to one of their choosing.

The other significant quality that each of these people possess is that they are very determined to accomplish their goal. A couple of years ago, I wrote a short article that describes how I set about achieving a far reaching goal.

Like a Steely-Eyed Missile

Large accomplishments require pursuing a dream or objective to completion. Due to difficulties along the way, it's often it's hard to keep the end in sight. Dreams are the building blocks of goals. They are also what keep us steadfast in the pursuit of the desired end result. Being faithful to a dream is what keeps us on track to follow a dream with the

intensity of a “Steely Eyed Missile”. I’ve been asked, “With the wreck, injuries and everything else, where do you find the strength to follow your dreams?” This is how I do it!

Building a Dream That Will Stay the Course

Most of mankind’s creative thinking is done in a semiconscious state, halfway between consciousness and deep sleep. It’s there, that we come up with most of our dreams. Since the semiconscious does a lot of good work, it’s important to write down the details of your dream so you don’t forget important information later on. Once you’ve settled on a good dream to follow, don’t be afraid to modify it to find something better or more workable. Make sure you have a clear vision of your dream!

Make a list of steps necessary to achieve the goal

Achieving the end objective is best accomplished by starting at the beginning and working toward the end. Never voice the negative when making this list. For instance, if you say to yourself, ‘I don’t have enough time or money to do this’, you defeat yourself before you even start. Negatives should be treated as roadblocks to be overcome or as sacrifices you have to make.

Can I make the sacrifices necessary to achieve the goal?

Before you start working your list, you have to ask yourself this question. It’s best to write down all of the sacrifices you would have to make (monetary, time, emotional, family, physical). For each sacrifice list how and if you could deal with it. Look at the objective and the sacrifices together to determine if you really want to pursue this dream.

Start working the list

Difficult goals require extra effort to reach. They need the most will power to carry on, and require you to be steadfast as you overcome obstacles. You have to pursue your goal with the determination of a heat seeking missile. This is where having a good dream is essential. The

clearer the dream, the easier it is to stay on track.

Often, you will have to use the deep well of inner strength that each person has but seldom draws on. Remember, when you think you've given it all you have, there's always some more that you haven't yet tapped. Long distance runners are good at this.

It gets harder to hang in there when you hit a major stumbling block. Treat these as roadblocks to be overcome. Modify your list of tasks to navigate around or through these obstacles. Never voice the negative. If you remain positive and work towards the solution, you'll make it. When you fall on your butt, dust yourself off and keep on going. Expect a sore butt on occasion, it's inevitable; just don't treat it as a defeat. You can't stop a person that keeps on coming.

Don't be afraid to take occasional small breaks from pursuing your dreams. You need this for your own mental and physical health, but also for the people around you.

When things get tough, remember, you have the heart of a lion and the strength of a bull!

Don't put off your goals too long

You may get 50 years of good health as an adult - if you don't take advantage of them, opportunity will slip away. Rather than saying, "maybe, one day", try saying, "today."

Constructing a Wagon and Choosing a Team

Some of the first questions that a future teamster has to ask are; how big of a wagon will I be driving and what will I need to pull it with? Here are some general guidelines:

The weight of a wagon and any accompanying trailer should not exceed the weight of the team pulling it. For example; if you want to pull

your wagon with two Belgian Draft horses that weigh 2,000 pounds apiece, the fully-loaded, total weight of the wagon should be less than or equal to 4,000 pounds. If you only have a light mule, weighing only 1,000 pounds, you'll have to live a little more Spartan, to keep the weight down to this value. By keeping the weight within these limits, it will give you the ability to travel approximately 100 miles a week, while navigating a moderate amount of 7% grade hills and an occasional 10% grade.

When it comes to selecting how much weight to pull on your journey, lighter is better. An overweight wagon will result in the wagon getting stuck on a lot of hills and a team that quickly gets run down.

This brings about a dilemma. A heavy wagon means that you can travel in more comfort and carry more supplies. But, having more and bigger animal's means that you have to carry more supplies and the horses are more difficult to maintain and control. I recommend a happy balance point of using two or three large draft animals that are driven abreast. If you intend to go with more horses, you'll probably need to drive them in tandem teams, which is not nearly as efficient as driving a single row of animals. Also, a teamster should be fairly experienced before he graduates to tandem teams.

Then, there's the question on whether you should use horses or mules. If you do not have previous experience with mules and do not plan on driving in very hot weather, then I recommend horses. The advantage of horse is that they are cheaper, generally easier to train and handle, and are also more forgiving to their owners. Mules on the other hand, are more tolerant of heat, get by on poorer feed and are more rugged. They're also smarter than horses and remember things a long time. If you correct a mule by giving him a slap on the neck, a month later, he might just correct you with a kick in the chest. I'm a horseman myself, so I opt for horses and will primarily discuss them in the remainder of the book. But, in no way do I belittle mules. There is definitely a reason why people go to all of the trouble to breed a horse with a jackass!

Training a Team for the Road

Before setting off on your adventure, you'll need to spend a lot of time with your team. There are several reasons for this: you probably need to accustom the team to road traffic and things that may scare them, you may need to sharpen your driving skills, and the horses will have to be physically conditioned.

Most horses will overcome their fears if they are slowly accustomed to them. If you want to get him used to cars and traffic, start by tying them securely near a busy road and let them get used to the sight and sound of traffic. Then, start working them on back roads, followed by streets with ever increasing traffic. Ensure you work them across obstacles like bridges and railroad tracks. If they start getting nervous, just slow them down and talk with them in a soothing voice. NEVER let them run from something. Give them some time and they'll get used to it.

The more you drive, the better you'll get. I have several thousand hours of driving experience and learn something new all the time. Take the time to sharpen your skills before you set out.

After about six to eight weeks (eight to ten hours a day) of heavy haulage, a team will start to approach their top physical condition. If they don't get this prior to your departure, allow enough time for slower travel at the start of your journey. When they first start out, a team may only travel ten miles a day and require a day off every third day. As their conditioning improves, they'll travel farther with fewer days off.

Choosing a Route

An ideal route of travel would be on flat, back roads, with little traffic and no large cities. In reality, all these attributes are usually not achieved. Back roads seldom go for any great distance, as they stop abruptly at rivers with no bridges or natural obstacles like hills,

mountains or canyons. Interstates are generally not an option. This leaves state and federal highways. For major rivers or mountain ranges, there may be only one suitable crossing every one or two hundred miles. Often, the best routes are along old U.S. federal highways that parallel an interstate that was constructed at a later date. Most major state and federal highways are limited to hills with a grade of less than 7%. Routes that follow railroad lines are often the flattest, as they are usually limited to a 3% grade, except for some that run through mountains. Cities that take more than a day to cross should be avoided as you are limited in potential camping spots. Another consideration in where you will be able to pick up supplies.

Financial Preparations

While travel by horse and wagon is relatively cheap, it's not exactly free. By and large, Americans are very generous and will help out a lot in providing material support. Even with this, I generally count on spending \$1,000 to \$1,500 per month when I'm on the road.

Contrary to popular belief, most of our ancestors that traveled west by covered wagon were people of means. It took quite a bit of resources to pay for a wagon, oxen and provisions necessary to travel in the 19th century. This still holds true today. You can reduce expenses by: shoeing your own horses, living modestly and being friendly and receptive to the people you meet, but it's still going to cost something to feed the team and yourself.

Psychological Preparations

There's an old saying - You can't stop a man that just keeps on coming. In order to succeed on an adventure of this sort, you have to be true to your dreams and stay the course. When you reach what seems an impassable obstacle to success or get a swift kick in the butt, dust yourself off and keep-on-a-coming. You'll make it.

Skills to Be Learned

Learning how to handle, harness and drive a team is essential. If you don't have these skills, there are several good driving schools around the country that can teach you the basics. You'll still have to build on these before you get going. A good tactic for this is to buddy up with someone that has these skills and pick up what you can from him.

If you learn how to shoe your own horses, your trip will be a lot easier and less expensive. A Ferrier typically charges about \$50 to \$100 to shoe a riding horse and about \$200 to \$300 to shoe a draft horse (every five or six weeks). Even if you can't pick up the skills necessary to shoe your own horses, try to learn enough to allow you to nail on a shoe that has fallen off or become loose. It's not always easy to find someone to do your horses out in the middle of nowhere.

Any construction or maintenance skills you have for the wagon are a big advantage, as it will cut down on costs and leave you more capable for handling emergency repairs.

Chapter 3 - The Wagon

Four primary ingredients are necessary to successfully journey by horse-drawn wagon; a good wagon, a good team, a capable teamster, and the road itself. A team and the teamster can continue to improve as the journey progresses. What you have for a wagon when you first pull out of the driveway is what you will probably have throughout your trip. So, it's essential that you get everything as it should be before you get underway on your adventure. This chapter will discuss in detail different attributes of the wagon to help you get it right before you actually construct or retrofit a wagon for travel.

Wagon Size

Considerations in choosing a wagon size include weight and physical dimensions. In the previous chapter, I mentioned how the weight of the fully loaded wagon should not exceed the weight of the team. This means that before the wagon is loaded with supplies for the trip, its weight limit should be approximately two thirds of the fully loaded weight. For example: If you plan on using a pair of 2,000 pound draft horses to pull the wagon, your fully-loaded wagon weight should not exceed 4,000 pounds. Before you load the wagon with horse feed, water, people and your supplies, the empty wagon weight should be no more $\frac{2}{3}$ of that weight, (2, 665 pounds.) This leaves slightly more than 1,300 pounds for your supplies. The weight for these adds up quickly.

Typical Supply Weights for Two Draft Horses and Teamster

| | |
|---------------------------|-------------|
| 30 Gallons of Water | 240 pounds |
| 200 pounds of Grain | 200 pounds |
| 6 bales of Hay | 360 pounds |
| Spare Parts & Tools | 150 pounds |
| Teamster | 200 pounds |
| Personal Effects and Food | 100 pounds |
| | |
| Total Weight | 1300 pounds |

As you can see, even this modest amount of supplies will drastically raise the fully-loaded weight of the wagon.

Another consideration is physical size. Some general guidelines are to try and keep it less than 8 feet wide and no taller than 13 feet. Reducing the height below 13 feet has two big advantages. First, many railroad bridges in this country are less than the normal 13' 6" standard (as well as tree limbs and power lines in peoples yards). Second, you'll offer less wind resistance. Keeping your height below ten or eleven feet is a good idea.

Normally, the biggest restriction on width is how much room the team requires. Two draft horses, traveling side by side need about seven feet of width. If you opt for three horses, your total width will be slightly more than 10 feet. When you start traveling down an 8 feet wide, Kentucky 2-lane, this could be a problem. Most road lanes in the country are 10 to 12 feet wide, so you should be okay, but the farther you can separate your left hand horse from traffic, the better off you'll be. This is especially true when traveling across bridges. My rule of thumb - limit your width to two or three horses.

Wagon Gear

This is the chassis that the wagon box will sit on. There are several companies that manufacture wagon gears. The one that I have

dealt with the most is the Pioneer Equipment Co., from Dalton, OH. Most teamsters that I have talked with prefer their wagon gear over most others. Pioneer manufactures excellent 1, 3, and 6 ton wagon gears. Their phone number is (330) 287-0386. The Weingard Family, which own and operate the company is Amish, so don't expect them to be open on Sunday or have a website. However, they are very helpful, can offer all sorts of advice, will accept a charge card over the phone and ship everything right out to you by freight. They'll also be happy to send you a free catalog.

If I was purchasing a new wagon gear to be pulled by two or three draft horses, I would opt for the following: 3 Ton Wagon Gear for Rubber Tires, bolster springs for suspension, independent front and rear brake systems with separate brake pedals/master cylinders, and a metal wagon tongue (these have adjustable springs to reduce the weight on the horses' necks). In 2008, such a rig cost about \$2,500 - this did not include the tires.

If you are constructing your own wagon gear, try to use only front axles off vehicles, so you don't have the additional weight of a rear differential (it won't do you much good).

I have a friend who set off on a cross country wagon trip with old wooden wagon wheels. After a lot of costs and heartache, he changed over to rubber-tired wheels. While they may look cool going down the road, wooden wheels have several severe drawbacks; they're not nearly as rugged as rubber-tired wheels, maintaining them is extremely difficult and expensive, they are a rough ride; and outside of the Amish communities, it's almost impossible to find a Wheelwright in this day and age. My advice - Opt for rubber tires that have at least 6 ply.

Brakes

Horses are capable of holding back approximately their own weight on hills with a grade up to about 7%. However, there are two caveats to this. First, they can only do so for a relatively short period of

time and it takes a lot out of them. Second, only the two horses that are attached to the pole can actually hold back a wagon going downhill. But, there is a pulling rig for three horse, hitched side-by-side, with which all three horse can act in the hold back - more on that later. Since a team is limited in the hold back, it's essential to have good wagon brakes. Better yet, two independent braking systems in case of a failure. A couple of years ago, good friends of mine (a Dutch couple, traveling by horse-drawn wagon in Europe) had a brake failure that resulted in a pretty severe accident. I have twice lost brakes, but fortunately, both times I was able to recover without an accident. Bottom line - have at least one set of good brakes; preferably two. If you purchase the Pioneer chassis, with brakes, they come with the Dexter brand, drum type, trailer brakes and a nicely designed master cylinder/brake pedal.

Pulling Rig

The standard pulling rig for a wagon is a tongue with a two-horse evener attached to it. If you need more information on pulling rigs, I recommend purchasing the "Workhorse Handbook", by Lynn Miller. This is available at www.smallfarmersjournal.com. I use a wooden evener and a wooden neck yoke with a metal tongue (pole), as they make less noise.

Pulling With Three Horses Abreast

The standard three-horse evener will generally not work when pulling a wagon with a tongue. This is because the middle horse would have to walk with one leg on each side of the pole. There are four basic ways of solving this problem:

1. The first, is one that I prefer - Instead of a single tongue (pole), use two that are spaced wide enough for a horse to fit between them. This would resemble a set of shafts for driving a single horse, but would be much sturdier. Then, a neck yoke for all three horses is attached to the ends of the two poles. With this set up, all three horses can act to hold

back the wagon on the downhill. Also, their heel chains lead straight back to the individual single trees. The point of draft is centered on the wagon.



Three mules, belonging to John McComesy, pulling with a double pole arrangement. Instead of a neck yoke, John uses chains leading from the end of the poles to the chest strap snap.

2. My next favorite method is to use a ‘3 horse pole evener’ manufactured by Pioneer Equipment. I’ve included a picture of this device because it’s hard to explain. I tried it out prior to starting on my first journey, but it has a serious drawback. The off-side horse in the hitch has a tendency to bang his shin on the single tree from the middle horse. This might injure the horse. The horse also has a tendency to worry about getting banged so it doesn’t pull as hard as it should.



Pioneer 3-horse Pole Evener

3. Use a separate single tree that is not attached to the evener for the other two. - There are three problems with this setup - First, it puts one horse way out to the side. Second, it results in an uneven draft on the wagon (the force to pull the wagon is then to the side). Finally, the third horse cannot act to hold back the wagon.

4. The last option would be to bolt the standard three-horse evener to a point offset from the center of the wagon. Then you would have two horses on one side of the pole and a single on the other. This results in an uneven draft to the front of the wagon - not a good idea.

Wagon Box

A lot of thought has to go into designing and building the wagon box. This is where you'll probably either add, or save the most weight. There are several factors which must be taken into consideration: weight, size, teamster's comfort, strength, storage capacity, protection from the elements. The ideal wagon box should have the following attributes:

Weight - Doesn't significantly add to the overall weight of the wagon

Size - Low enough to fit under all bridges, tree limbs and power lines going to your host's garage. Width - less than that of the horses.

Comfort - It has all of the amenities that you would find in a normal camper. The driving compartment is boxed in to keep you out of the elements.

Strength - The wagon needs to be strong enough to support itself through bad weather and rough terrain. It also needs to be strong enough that you can tie the team to the wagon. I like to use aircraft cable, leading from the center of the wagon gear to a guide ring welded to a metal frame on the side of the wagon. Then, if your horse gets spooked and pulls back with several tons of force, he won't pull the wagon apart or over on himself.

Weather - Not only should your gear remain dry, warm and out of the elements, you should too. Also, water and waste should not freeze.

There are three distinct ways of getting the wagon you need: 1) Build it from scratch, 2) Buy one that is already made, 3) Fit a lightweight camper to your wagon gear.

Building a Wagon From Scratch

This is the most difficult option. I built my first wagon from scratch. I had all of the attributes shown above, but it was way too heavy. I had been on my journey for several months before I got it weighed. The fully loaded weight came in at 7,700 pounds. This is why I had to go with four draft horses (pulling in a 4-up). The mistake I made when building it was to not count the pounds.

My second wagon was purchased from Bernie Harberts for the sum on one biscuit. The Biscuit Wagon was constructed by Bernie with a very good design, using light-weight materials. Fully loaded, it weighs 3,800 pounds. By the time I put in a few modifications, it had all of the ideal attributes a wagon should have and still came in under the weight that could be pulled by two draft horses. For this reason, I will use it as a model for discussing what should go into a wagon if you build it yourself.

The Biscuit Wagon is 13 feet long, 6 ½ feet wide and approximately 10 feet high. It was patterned after an old Sheepherder's wagon, with a box like construction and a bowed roof. The living compartment has an interior dimension of 6 feet wide by 9 ½ feet long. In this space is an Alaskan Camper type bed that makes into a table and two bench seats, a set of drawers with a counter top, a commode, sink, stove and refrigerator. It has hot and cold running water, and 120 Volt power. The enclosed driving compartment has two seats and the shower. Outside, there are two large compartments and a rear shelf for storage. Essentially, it is a self-contained light weight camper that can easily be pulled by two horses.



The Biscuit Wagon

The Biscuit Wagon uses (2), four inch steel tube caring beams. These, rest on the bolster springs of the wagon gear and carry the entire weight of the wagon box. On these, are welded a light weight metal frame to support the floor, walls and ceiling. There is a middle walkway that is recessed a foot to allow the occupant to walk upright inside, while the wagon maintains a low profile. The walls are constructed of a sandwich of 3/8 plywood, 1 inch foam board, and 3/16 inch plywood. Steel strapping and angle iron holds it all rigid. For the ceiling, Bernie steam-bent some one inch thick wood bows for support, then sheathed it in 3/8 plywood. I added a rubber roof to that for a good weather seal.

Hot and Cold Water

In order to build utilities into the wagon, I had to convert one of the exterior storage boxes. In this box I built: a 20 gallon cold water tank

(with a 12 volt pump), a 6 gallon propane-fired hot water heater, a 12 gallon waste tank (for the toilet) and a 20 pound propane tank.



In the process of constructing a compartment to hold the utilities: hot water heater, 20 Gal. cold water tank, pump and waste tank shown.

Commode - RV stores are the best places to go for parts, so I picked up a commode which I positioned over the waste tank. The flush valve was plumbed into the cold water.

Sink - A little stainless steel bar sink worked great. It's plumbed into both the hot and cold water with ½" plastic tubing.

Shower - I didn't have room to put the shower in the living quarters, so I mounted the shower head above the door in the driving compartment. The floor lifts up on hinges to expose the shower tub (made from a plastic tote). To take a shower, I first hang my shower curtain on some hooks, turn on the water and let it rip!

Freeze Protection - Since the wagon is often located where the temperature is below freezing, I had to insulate everything so it wouldn't break. The utilities storage compartment is lined with ½" foam board and the cracks sealed with foam insulating spray. I then installed a small 12 volt fan in the cabin that blows hot air into the utilities storage compartment. So far, this has worked well down to about 5 degrees f.

Electric Power

The wagon has both 120 volt AC power and 12 volt battery power. A bank of deep cycle batteries is charged by a solar panel system to provide free electrical power. A 120 Volt AC inverter is fed by the batteries to power my refrigerator, lights and wall outlets. Exterior warning lights and water pump operate at 12 volts and are directly powered by the batteries.

The price of solar panels has been drastically reduced in the last few years. Before my next journey, I'm going to vastly increase the capabilities of my electrical system to be completely independent of outside power sources.

Solar Panels - Recently, I've seen solar panels selling for about \$1 per watt. During my next wagon retrofit, I'll be installing 600 watts worth of panels. To keep the current low and required wire size small, the four 150 watt panels will be wired Series/Parallel to provide a 24 volt output to the controller.

Solar panel charge controller - Several are available in the \$100 price range. These act to limit the current going to the batteries so they are not overcharged.

Deep Cycle Batteries - I'll be installing four batteries, which should provide about 600 amp hours of power. This is more than enough to run everything through two cloudy days. When buying batteries, make sure you specify "Deep Cycle" and not Deep Cycle - Marine. Deep Cycle batteries cost about \$150 bucks apiece and weigh about 50 pounds each. The batteries are stored in a compartment under the table, but vent to the

outside. This is important as a small amount of hydrogen gas is created in the charging process.

It's important to do some battery maintenance. About once a month, pull the caps and make sure there is enough water in each of the cells (all plates completely covered).

Power Inverter - To keep the current and wire size down, I'm going with an inverter which is fed by 24 volts DC. It will have a continuous rating of 2000 watts. I found that the pseudo-sine wave ones work just fine. Cost is about \$150.

Wiring - AC wiring is with standard Romex. Since there are never enough outlets, I made sure there are plenty, even on the outside.

With a setup like this, I can run quite a bit off the electrical system, to include; a refrigerator, coffee pot, microwave, lights, a fan for summer, outlets, etc. - Just like home!



Interior view of the Biscuit Wagon, looking aft



Interior View of the Biscuit Wagon, looking forward.

Heating

I use one of the propane “Mr. Buddy” heaters. They normally take a 1 pound can of LP, but at the hardware store, you can buy the fitting that allows it to be converted to pipe. I run my heater off the same 20 pound LP tank that feeds the hot water heater. Unless it’s below 15 degrees f., I can keep the heater on low and the propane tank will last for 3 ½ days. When I’m driving down the road in the winter time, I leave the living compartment door open and it stays very comfortable in the enclosed driving compartment.

Driving Compartment

On my third journey, I had the driving compartment enclosed with

a 'boat-type' canvass, with a clear plastic windshield and windows. This held up pretty good for a year, but the Velcro that was used to fasten the doors has taken a beating. On the next trip, I'm going to have a carriage maker build a hard enclosure with Plexiglas windows and windshield. I think this will stand up better. The windows will separately open to admit fresh air.



The Biscuit Wagon - sporting the new 'boat canvass' enclosure to the driving compartment. This picture was taken just prior to Trip #3.

With a couple of good seats, the driving compartment becomes a second room in the wagon. When camped with a partner, it's a nice place to go and get a little space when the 9 1/2' x 6' cabin gets crowded.

When a hard wind is blowing a cold rain in your face, it doesn't take long to wish you had an enclosed driving compartment. Horses seem to get along pretty good in adverse weather conditions. We humans aren't as hardy.

Warning Devices

The single biggest danger in driving a horse-drawn wagon down the road is not being visible to motor vehicles. As a minimum, in every state (that I know of), a wagon has as much right to the road as a car or

truck (except most interstates). But after an accident occurs, that fact is not as important as you would think. If a car is traveling at 70 mph, and you are at 3 mph, you will lose. The best idea is to prevent a collision. There are some very good warning devices that let a car know that a slow moving vehicle is ahead. I'll discuss each of these.

Slow Moving Vehicle Signs - These are the orange triangle signs that are often seen on the back of tractors and other farm machinery. As far as I know, they are required on the back of a wagon in all 50 states. I currently have one mounted on both the wagon and trailer. Before my next journey I'll have at least two more. These work good, but they're not foolproof. Not all drivers know what they mean. They've also been watered down by people using them as driveway markers - a very bad practice.

Marker Lights - I have LED marker lights mounted on the upper four corners of the wagon (red for the rear and yellow for the front.) In dimmer light, they help a driver in a car identify the dimensions of what is ahead.

Flashers/Beacons

Yellow Flashers - I have a high intensity LED flasher mounted on the rear of the wagon, as high up as I can get it. This helps out a lot, providing a "Caution" to the driver of a car or truck. But, they're not foolproof. So many people are using orange flashers; the significance of the yellow flashing light has been watered down. When seen, they don't automatically cause the foot to come off the accelerator. I keep mine on all the time!

Red and Blue Flashing Lights - I have these mounted on the Biscuit Wagon, but they're not legal to use. But in really heavy traffic or heavy fog, I turn them on and take the chance of getting a ticket. I would rather be poorer than dead. The advantage to these is that they are immediately associated with Law Enforcement or other Emergency Vehicles. When seen, not only does the driver's foot come off the accelerator, it also goes on the brake pedal - it's an automatic reaction. The two times I've been pulled over for using mine, I got off with a warning.

White Flashing Strobe - These are most commonly seen on school busses. As far as I know, they're not illegal to use. For my next trip, I'll mount one on the wagon. These automatically cause the driver of a vehicle to slow down. I bought one for my friend John to use on his mule-drawn wagon and he says it work great.

Flags - These are very effective at slowing down a car. I'm going to mount an orange flag on a fiberglass pole and position it so that it's about 14 feet above the ground. Then, I am more visible to a driver immediately after I have crested a hill.

Written Sign - After getting some feedback from drivers, I put a large lettered sign on the back of the wagon that says, "Horses Pulling". With the wagon in the way, drivers don't think that it might have animals in front of it.



Warning Devices that are essential to safe travel – Slow Moving Vehicle Signs, Flags, Flashers, Marker Lights

Headlamps

A couple of years ago, I was driving through Arkansas and got caught out at night without a place to camp. It was pretty hairy, so the next day I purchased and installed a couple of 12 volt lights on the front of the wagon, as high as I could get them. These work very well for

warning oncoming traffic and letting me see the road. Horses have very good night vision, so they could care less.

Electric Fence System

I use an electric fence controller, mounted on the wagon to power a portable electric fence. The fence is supported by 3 1/2 feet long metal posts that have a pigtail of insulating plastic on top. About 20 of these posts, positioned 15 or 20 foot apart, will layout an electric fence enclosure of about 1/4 acre in size. I use 3/8" nylon rope that has metal filaments braided into it. This easily rolls onto a reel and is much better than electric fence tape. The key to constructing a fence of this type is that a horse has to have room to escape when another horse chases it away. Ensure the enclosure is at least 50 across and there are no sharp corners. That way a horse has room to move out of the way of another and not get trapped in a corner. If you don't do this, sooner or later a horse will knock the fence down and you'll be chasing them.

If I'm in an area where I'm really worried about a potential breakout, I'll tie up at least one horse all night. With fewer horses in the pen, there's less chance of a breakout. And, if they do, I have a horse to saddle up and chase the other ones with.

Buying a Wagon That's Already Made

If you don't have the skill-set necessary to build your own wagon, this is a good option. After my first wagon was totaled by a semi in Mississippi, I really lucked out getting the Biscuit wagon from Bernie Harberts. At the time, most of the bones in my left shoulder and the left side of my rib cage were still broken and I physically couldn't have built one from scratch. I'm pleased to say that I drove a hard bargain and even though Bernie got a really good biscuit for the wagon, I didn't have to throw in some jam or gravy to go with it!

I really have to hand it to Bernie - he really knows how to build a

wagon. It has all of the attributes you could want. In fact, it's such a good design, Steve Rich, from Alabama, drove up to Arkansas to get pictures and all of the measurements. He then went home and built an exact replica.

So, it is possible to pick up a really well made, second hand wagon. The best place to check is to find a local driving club that makes smaller journeys within a state. Contact a State Draft Horse or Mule Association to find them.

Fitting a Lightweight Camper to a Wagon Gear

This is a very good option that is being used by a lot of people. If done correctly, you can end up with a wagon that has all of the desired attributes with a fraction of the work you would have building one from scratch. Most of these campers use a lot of aluminum, so they are light as well as being fairly strong.

The most popular design uses a pickup-bed type camper, with the cab-over going towards the front. Another door is usually cut between the driving compartment and the living space.



John McComsey's Pickup-Bed Style Wagon

Other modifications will still have to be done in order to support the horses. Some things that will have to be done include; constructing strong points to tie the team to the wagon, building storage boxes and shelves for horse feed and other stuff, enclosing the driving area, freeze protecting the plumbing, installing vehicle warning devices, etc.

As good or bad as a wagon may be, it doesn't draw a candle to the team. The training, care and well-being of the horses will make or break you when it comes to wagon travel. All Teamsters provide every care they can for their animals. The team's comfort and well-being always takes precedence over human comforts. If it were any other way, the trip would quickly come to a halt. The longest chapter in this book is about the team, and as you'll discover, it won't even scratch the surface.

Chapter 4- The Team

Finding a Team

If you currently don't have a team for your wagon, you have to go about finding one. Since these animals are going to make or break your journey, you're going to want some good horses. If you don't have a lot of experience in selecting the right team, you need to buddy up with someone that does. Preferably, that person will not be a horse trader. It's not unheard of for a horse trader to unload some pretty poor animals on an inexperienced, potential horse owner. Your best bet is to contact a local driving club or a State Draft Horse Association for help.



At Horse Progress Days with the Belgians, Bill and Bob - Odon, IN.

Here are some of the attributes I look for in a team of horses:

- 1) Buy a team that has been working together. It's much harder to find two separate horses to fill out a team, rather than one that has already been put together.
- 2) The horses should be between the ages of 4 and 12. Younger than four and they are not fully developed yet and probably pretty inexperienced. Older than 14 or 15 and they might be too old to keep weight on as you travel 100 miles a week.
- 3) They have to have good feet. A dark colored hoof is better than a white one. Make sure they stand straight and are not pigeon-toed or duck footed. From the coronet band to the sole, there should be no fever bands on the hoof. Make sure there are no large cracks in the hooves. Check the soles to ensure they don't have thrush or a soft sole.
- 4) They must stand well when their feet are picked up and when they are shod off the floor. This is important because most draft horses today are shod in stocks and haven't been trained to stand quietly when they are being shod without them. You won't be able to drag a pair of stocks along with you on the trip.
- 5) They should have good, solid, straight legs that are well developed. Have the horse walked and trotted away and towards you so you can observe their gait. Make sure they walk straight and carry their feet under themselves well.
- 6) They should be well-muscled and straight backed. I don't like a horse with a high-perky type butt. I find that ones that have the hind quarters extending well down into the legs are stronger and pull longer.
- 7) Check for white marks (indicating scars) on the top of the neck where the collar rests. Scar tissue is not as tough as regular skin and a horse with scar tissue on top of the neck might be more prone to neck sores.
- 8) Look them in the eye and see if they are calm and kind.

9) Ensure they have good barn manners. They are respectful when you move around them and do not crowd you. They should move to the side when you press on their sides with two fingers and a moderate amount of pressure.

10) They should stand well when harnessed.

11) Ground drive them and make sure they listen and respond to both voice and line commands. Back them up and make sure they know how to do this.

12) Hitch them up to a wagon or forecart and drive them. Ensure they handle well, but also that they have a little zip. It's a lot easier to get a horse with zip to behave calmly, then to get a lazy, too calm, horse to get-up and go.

13) Ask the owner if they have any vices - he'll surely know.

14) Reach behind their front teeth and make sure the back teeth aren't sharp and need to be floated.

15) Finally, don't buy a horse you don't like.

Earlier this year I wrote the following article on what it takes to be a horseman. One of the really neat things about traveling with horses is that when you live with them 24/7, you really get to know them. What you'll find out is that eventually you'll become part of the team.

The Making Of a Horseman

As a young boy, I used to marvel at the presence that certain men had around horses. I gazed in wonder as my 140 pound grandfather would dominate large draft horses and bend them to his will. "Why does a stallion, that is mostly wild, readily accept direction from a man one

fifteenth his size, when he could easily just run over the man or just dance away?” I wondered.

The old timers used to say, “A horseman is born with horse sense. The horse instinctively knows that the horseman is the boss and they have to obey him”.

Hollywood would later portray such men as ‘Horse Whisperers’ and also attribute magical qualities to them.

Long after I started my 6000 mile trek in a horse drawn wagon I learned the truth. A horseman isn’t born with these abilities; he or she has to learn them. To become a horseman, you must first become part of the herd. Not only that, you have to grow to be the leader of the herd.

Here are some facts about horse behavior and communication as I understand them:

- Horses have evolved into highly social animals. To them the herd is everything.
- All horse communication is based upon things that affect the herd and interactions within the herd.
- Horses are prey animals. They are always on the lookout for something that wants to eat them.
- There is no such thing as democracy within a horse herd. Every animal has a rank within it and knows his or her place. They don’t even want a democracy. They are most comfortable when there is a clean pecking order and they know their own place. A lead horse within one herd can be the lowest ranking horse in another.
- Different activities can result in different pecking orders. The primary leadership ranking can be seen at meal times. The highest ranking horse gets first choice of the food. But for other activities, like; when it’s time to graze, who goes first on a trail, or who greets strangers, other horses within the herd can assume the

leadership role.

- Ranking within the herd is not always about which horse is the strongest, fastest or the best kicker. The most important attribute which determines the leader is attitude. Sometimes a member of the herd will yield his or her position, based solely upon the attitude of a new member. Sometimes, a horse whose position is being challenged will defend his or her ranking – that's when strength, kicking and biting ability also become important. But attitude still remains the most important.
- Horse communications are only about 10% audible. The remainder is visual, touch and subliminal. There are people that doubt that horses communicate with a form of ESP, but none of these doubters are horsemen. When driving a team down the road, I can often just cast my thoughts on of one of the horses and he'll turn his head to look at me.
- A herd isn't completely rigid; there are smaller organizations within it. The most common is the buddy system. Usually, most horses will pair with another animal and become best friends, often even sharing the same grain bowl. When a horse loses his or her buddy, they can grieve for the animal for years.
- As tight as a herd is, a team of draft animals is much tighter. A good horseman is one that gets to be the leader of a herd. An even better experience is when a team of horses also accepts the person as the leader of a team.
- Horses think of people as two legged horses. To them, you're just another horse that could either be inside or outside the herd.

The best way to learn horse communication is to spend some hours watching a herd interact. Pay particular attention to: where each member stands in relation to the others, ear and neck positions, mock kicking, mock charges, mutual grooming, tossing of the head and body checks.



The bond between man and horse can be quite strong

Next, start moving in and around the horses. Be respectful of their size and strength, but don't move within the herd with any fear. Kindness is good, but chasing away a disrespectful horse does more. If you watch the herd long enough, you'll see where the lead mare will get junior members to follow and obey her by first chasing them away (it's kind of the opposite from normal human behavior). Most importantly, demand respect. Respect their ability to possibly hurt you, but don't let them get away with showing any dominate behavior towards you. The best thing you can do is chase them away (just like the lead mare would do). If you have to extend your reach beyond their hooves, flick a lead rope at them or give them a tap with a buggy whip or stick. Also, bend them to your will by backing them up or spinning them in a circle with a lead rope. The best thing to do is to work them in a round pen or on a lounge line.

When working with one or more horses, always be careful of where you are. The easiest way to get hurt is when you are physically

caught between two horses that are interacting with each other. If you are next to a horse, keep a hand on him. If he moves, you can feel it right away and just move out of the way. If he starts to crowd you, chase him away.

As your confidence and ability to communicate grows, more and more you'll be able to control a horse with your will. This comes as they begin to accept them as their leader. Once you've reached this stage, you still have to become the leader for other behaviors as well (remember, there are different leadership roles for different activities within the herd). Try to mimic horse behavior for these activities.

There is a simple experiment to tell if you've achieved the proper position within a herd. Walk into the middle of the horses and stand still. If they all consider you the dominate 'horse'; one at a time, they will walk over and display a submissive gesture. Usually, this will be either a head rub, they'll place their nose, either on your shoulder, or under your armpit, or sometimes they'll just nonchalantly walk over and start grazing near you.

Other people will then start saying that you're a horseman. But in your heart, you'll realize that you're just starting to know something about horses, and you'll appreciate how much more you really have to learn.

Halters and Lead Ropes

I prefer a good leather halter for several reasons. First, they are more comfortable for the horse. Because they bother him less, he's less likely to rub it off. Second, if they absolutely have to break, they will. A horse that gets hung up on something with a leather halter rarely gets seriously hurt. This is not true of a synthetic halter. Finally, they look a lot nicer. When you are bridling a horse, put the bridle on over the halter, but ensure you slide the top of the halter back so you don't create a rub behind the horse's ears.

The most important thing about a lead rope is the snap. Only use bull snaps. The flimsy little barrel lugged snaps will always end up breaking. Ensure the rope has a nice tight weave. The loosely braided, cotton leads always fall apart.

Tying a Horse

Always tie a horse with a slip knot. If they freak out and you don't have them tied where you can easily pull the knot free by yanking on the end of the rope, you'll have to cut it. A good slip knot is like crocheting. Pull a loop made from the trailing edge through a few times, and then stick the end through the last loop. If you have to, you can pull out the trailing edge from the last loop and give it a yank - the horse should come free.

Never tie a horse with more than 4 feet of lead. If he gets the rope looped around one of his back feet he'll freak out. When you finally cut him free, you'll find he has a nasty rope burn across the heel that takes forever to get better.

Tying high is better than low (except when tying to a wagon). The horse is less likely to step through the lead rope with one of his front feet. If you're tying to a wagon or trailer, tie lower so that a freaked out horse doesn't pull the wagon over.

Harnesses and Harnessing

Harnesses come in different styles and are made of different types of material. First of all, you'll want harnesses that are made to work with a collar, and not the breast strap type.

Collars - A good leather collar with a vinyl-lined collar pad is essential. If the collar fits properly, it should rest on the ball of the horse's shoulder and you should be able to slide your fingers between the bottom-inside of

the collar and the horse's neck. After about 6 or 8 weeks of hard work, a horse's neck and collar size will shrink about 2 inches. So, if you haven't worked them a lot before you go, you should have spare collars that are a couple of inches smaller.

The best collar pads are foam and have a vinyl jacket. As the horse sweats, the vinyl allows the sweat to run off and not hold the salt against his neck, which causes shoulder galls.

Types of Harness Materials -

The two prominent types are either made from leather or biothane plastic. Leather harnesses are pretty, they're traditional, but they are also very heavy when you are trying to sling them across the back of a 18 hand high horse. Also leather harnesses require extensive cleaning and oiling. Biothane, on the other hand, is half the weight, twice as strong and you can clean it by spraying water on it. One of the highlights of my wagon driving career is when I replaced my last leather harness with one made of biothane.

Adjusting the Harness

The best thing I can say about this is to have someone show you how. The most common mistakes made are: the harness is improperly fitted to the collar, and the bit is either riding too high or low (it should be parallel with the ground and riding near the high part of the butt.)

Driving Lines

I like lines made out of Beta ($\frac{3}{4}$ or $\frac{7}{8}$ "") much better than leather ones. Beta is stronger than leather, easier on the hands, more weather proof and less slippery when wet. With Beta, I can drive all day without gloves. On the other hand, leather would turn my hands into hamburger in no time at all. I'll have more on driving lines when we get to the different types of hitches.

A final note on harnesses, try to hang them up and always harness and unharness a horse the same way. You'll meet a lot of teamsters that

will want to give you a hand. Resist the temptation; everyone does things differently and it takes forever to figure out what they've done with your harness.

Driving

A properly driven team moves in a straight line down the road. They keep their attention on the task at hand and are responsive to the wishes of the teamster. The driver needs to constantly provide feedback to the team. In addition to providing direction, it's the responsibility of the driver to both encourage and sooth the team.

A team is driven with a live bit instead of slack lines. If done correctly, the driver should have a few pounds of pressure applied with the line in each hand and should be able to actually feel the pressure of the bit. If the horses start to change direction, the driver can immediately feel this and apply a correction.

A common misconception is that the blinders on a bridle are there to prevent the horse from seeing scary things. Actually, their purpose is to help keep the horse focused on his path and not on distractions in his surroundings. They also act to keep the horse's vision binocular (with two eyes), rather than monocular.

Horses have good hearing and are constantly listening to what the driver has to say. Commands like, gee (right), haw (left), get-up, whoa, easy, or back, reinforce direction received through the driving lines. If an individual animal requires instruction, call out the horse's name before giving the command. A calm reassuring voice goes a long way towards soothing a horse through a potential scary situation. Attitude is infectious; if you are excited, they will be as well. Also, a little encouragement when pulling up a large hill will help get the wagon over the top. In summary, verbal communication can be an important as what the team feels through their bit.

Single Horse

The advantage of driving a single horse is that the teamster only has to communicate with a single animal. The lines are held with a slight to moderate amount of pressure. Imagine that you can feel the bit in the horse's mouth through the lines. Then, for a turn, apply just enough pressure with one line to get him turning in the desired fashion. Just prior to starting the turn, give the appropriate vocal command (gee or haw). As soon as the desired turn is made, relax the pressure of that line.

To get the horse to go slower, use the command "easy" or "steady". The command "whoa" should only be used when the horse is required to stop. "Whoa" is the most important command you have and the horse should instantly obey. If you have to, use a sharper momentary pull on the lines to reinforce your desire for horse to instantly obey the "whoa" command.

Backing up is not a natural act for a horse to perform. They have to trust the teamster to back them into places where they cannot see. If done correctly, the horse should begin backing up when given the vocal command "back", along with a sharper pull back on the lines. The horse should only stop backing when given the command "whoa". Left or right line pressure can be applied to steer the horse's butt in the correct direction while the horse is backing up. Every time I hitch up, I try to practice backing up at least once. Backing up a horse is one of the best things that a teamster can do when a horse needs a little obedience training.

If it takes too much pressure to hold the horse in check, there is probably something wrong. One of the most common problems is that the overhead check lines are fastened too tight. When I first bought the Belgians, Bob and Bill, they had this problem. They were used to the overhead checks being drawn up tight and had a hard mouth. The amount of line pressure required to drive them was excessive. I loosened the check lines up so the overhead check lines only applied pressure to the bit if either horse tried to lower his head from a normal driving position. After driving them for two or three times like this, they got

used to only having a light bit in their mouth and I had more available bit to control them with. Check lines should only be used to keep the horse from grazing or lowering his head and possibly tangling the lines; not to hold in a horse that is too willing.

Theoretically, driving a single horse is easier than driving a team of two; however, this is not always true when driving a wagon down the road. If a single horse is startled by something, it has the capability of moving very fast, especially to either side. For a horse to jump left or right, the only resistance that has to overcome is the bit in his mouth. Forward or backward motion is restricted somewhat, as the horse has to overcome the weight of the wagon as well. When driving a team of two, sideways motion is also restricted by the other horse in the team.

A horse (or horses) will normally signal his intentions when he is startled to the point where it will possibly run away. When you see his head go up and his neck arch, you have about 1 to 2 seconds to start hauling back on the lines and speaking to the animal in a soothing voice. Once the horse actually starts running, you have almost no ability of stopping him with the lines, only some minor directional control exists. Never let him run! Once he learns that he can run away from dangerous things, he will be more apt to do so in the future.

If you are teaching a single horse to drive, you have to be careful when first introducing him to the shafts. The first time you do this, lead him up to the front of the cart, then pull the shafts through the shaft holding straps. At this time, DO NOT fasten the tugs or holdback straps. Have someone walk behind the cart and push it along so that the shafts stay in the loops of the shaft holding straps. As you make turns and the shafts push against the horse's sides, he may freak out. If this happens, he might try and run away. As long as nothing is fastened in, he can run out of them without any problem. If the shafts were tied in, there will be a major 'train wreck'. Once a horse has 'learned' that shafts are dangerous, it will be hard to get them on him again.

Team of Two

Driving a pair of horses side by side is the most common configuration to pull a wagon. Time has proven that this is the way to get the ‘best bang for your buck’. It’s my opinion that two horses, driven side by side, will actually pull more than twice as hard as you would get from two single horses working alone. This is because horses are gregarious creatures and are more comfortable in the company of others. Also, they can be a little competitive, each trying to outdo the other. The same effect is seen when two men work together. It always seems that more work gets done with two men working together, than would have occurred if two men worked alone for the same period of time.

Both horses are driven with a single set of team lines. Each separate line has one piece that runs true from the teamster to the outside bit for the horse on that side. Buckled on to the straight line is a cross line, which is usually 10 feet long. The cross lines allow two horses to be controlled with a single set of lines. For instance, the left straight line (which leads to the left hand horse’s outside bit) has a cross line that leads through the right hand horse’s middle-inside hames ring to the left side of the bit for the right hand horse. The same thing occurs for the right line. The two cross lines ‘Cross’ on the inside. At the point where they cross, the cross lines normally run through a 2 inch metal ring to help keep the lines straight. A set of team lines for draft horses are usually 18 to 22 feet long.

The team pulls off a device that is called a two horse evener (double tree). The evener is designed such that each horse has to pull the same amount weight, even when one horse is running slightly ahead of the other. However, if one horse is pulling more than a foot in front of the other, the single tree on the trailing horse may hit a mechanical stop and the leading horse will end up pulling the whole weight. To prevent this, encourage the trailing horse with a “get-up” or a slight slap with the driving line. If this doesn’t work well enough, you can tap the trailing horse a buggy whip or poke him with a sharp pointed stick. Eveners come in various sizes from 36 to 54 inches (measured from single tree hole to single tree hole, on the main beam). When using a pair of drafts

to pull a wagon down the street, I like a 42 to 44 inch evener.



Supplies for Trip #3; including, a two-horse evener, neck yoke, a year's supply of hard surface horseshoes and horseshoe nails.

Hitching a Team – The cardinal rule is to always keep the lines in your hand. The next cardinal rule is to connect up the neck yoke first, before the heel chains. When unhitching, the heel chains are disconnected first, then the neck yoke. If you mistakenly hook up the heel chains before connecting the neck yoke, a very bad train wreck could result if the team took off with the end of the pole still on the ground.

While the team is still tied up with their lead ropes, connect the outside and cross lines. Then with the end of the lines in your hand, walk around and untie each horse. Put a half hitch in each lead rope and loop

it over the hames. The lead rope, leading from the hames should be long enough so that it doesn't restrict movement to the horse; but, short enough so that it doesn't get caught under the neck yoke.

Drive the team across the pole (one horse) and position each horse so you can connect up the neck yoke. After the neck yoke is connected, then hook up the heel chains. All the time, keep the end of the lines in your hand. Don't count on wagon brakes to hold it in place if the team decides to take off. I've seen a pair of horses pull a wagon over a mile with the brakes set.

Driving a team of two horses is an enjoyable experience. In just a few hours of practice, you can master the skills necessary to start pulling your wagon down the road. At first try to stay on back roads while you learn the ins and outs of travel.

Three Abreast

If you need a little extra horsepower to get your wagon down the road, this configuration is your best option. The advantage of a three-abreast hitch is that is nearly as easy to drive as a team of two, and provides you with an additional horse to do the pulling. The drawbacks include; an additional animal to care for, a more complicated pulling rig and more width to pull down the road.



Three Abreast – A lot of horsepower, without tandem teams

Driving three across is very similar to driving a team of two. The biggest difference is that you now have three animals to encourage to work instead of two.

There are different styles of driving lines to use in this configuration. For field work, it's common to use a normal set of team driving lines for the outside horses, then run check lines to the bit of the middle horse. A much better setup is realized by using lines that each have two cross lines. Three abreast driving lines, as well as lines for other big hitches are available at Meader Supply, in Rochester, NH. Their website is www.meadersupply.com.

Unicorn Hitch – (Two at the Wheel and one Lead Horse)

This is a very difficult hitch to drive that shouldn't be attempted on

the road by anyone who doesn't have a lot of driving experience. To prevent jackknifing the hitch, it takes an experienced driver and a really good lead horse. I drive it on occasion, but it's not near as stable as driving a 4-Up.



A Unicorn Hitch – While easy to convert from a team of two to a Unicorn; it's a difficult hitch to drive.

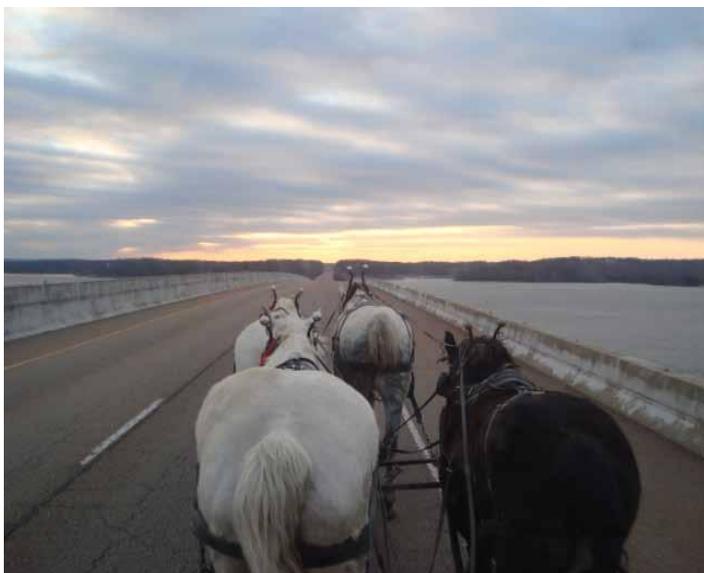
Four Abreast

While this is the favorite hitched used by the Amish for field work, it is not often used on the road. The biggest problem associated with running four-abreast is the width of the horses. Even with lighter horses, it requires about 12 feet of width to run with this configuration. That is why most people who use four horses on the road, do so with a 4-Up hitch (2 horses on the wheel, and 2 horses in front of them as a lead team). Having said that, I know that Ron Dakotah (one of the most

experienced teamsters in the country) drove a 4-abreast hitch of lighter horses down the road for years.

Four-Up

A four-up is a much better hitch for using four horses to pull a wagon down the road. The driver holds two set of lines, one for each pair of horses in the hitch. This is the easiest of the tandem team hitches to drive, but is a large step up from driving a single pair. Two eveners are used to pull the wagon. The first evener is attached to the pole, just forward of the front wheel. The wheel team is attached to this hitch and their breast strap snap is connected to the neck yoke, just like when driving a single team of two. The evener for the lead team is either tied directly to the end of the pole, or comes off a short chain that is connected to the end of the pole. I prefer my evener be directly tied to the end of the pole. The lead team does not have a pole between them, so they are capable of more side to side motion than the wheelers.



Four-Up – A really nice hitch

To drive a four-up, you want to have your fastest stepping horses out front, as the lead team. When you are traveling on flat ground, the lead team will normally do most of the pulling. The wheelers just play follow-the-leaders and walk along without doing much. This works well,

as you don't want the wheel team to walk faster than the leaders. If that was to occur, the leaders would try to get out of the way by going to one side or the other, causing a jackknife.

When you start climbing a hill, urge your wheel team to lean into their collars as well, giving you all four horses when you need them. When going downhill, only the horses that are attached to the pole with a neck yoke can act to hold back the wagon. This is when a good set of brakes comes in handy.

Hitching a Four-Up – This is a little bit trickier. First, you hitch up the wheel team, much like you would hitch up a normal team of two. Then it's best to hand the lines for the wheel team to someone that is sitting at the wagon. If you don't have someone, set the wagon brakes and back the wheel team up half a step. Tie the lines back to the wagon only tight enough so that if they tried to proceed forward, they would have to pull the wagon with their mouths. Now, go get the lead team and drive them in front of the wheelers, connecting their heel chains to the forward evener. Now comes the tricky part – you have to route the lead team lines back so they don't get tangled up in the wheel team. The lines use two guides, positioned on each of the wheel team horses. The first is through a ring leading from the top-inside bridle of each wheel team horse. The second is attached to the top hames ring. Most people thread the lines through solid rings. I like to use carabineers and snap the lines in. This keeps me between the wheel and lead teams for as short as time as possible. It's a very dangerous position to be in. If either team wants to really move when you're between the two, you are probably going to be severely injured.

Driving a four up - The lines for the lead team run over the top of your hands, with the trailing edges down. The lines for the wheel team come in under the hands with the trailing edge going up, then draping across the thumb. The wheelers will be held back until you get to a hill. After making a turn, you'll have to pull some slack out of the lines. Reach across with the opposite hand to pull slack out of either the wheel or lead team lines. This will seem a little confusing at first, but will soon become second nature. When you get to a hill, urge the wheelers into their collars with vocal commands or a little line slap.



Driving with four lines

The lead team is driven with the top line in each hand, while the wheelers are driven with the line on the bottom. When a line gets slack, you reach across with the opposite hand and pull on the trailing edge of the line.

Starting out with a four up - When you first try to drive this hitch, give the lines for the wheel team to a companion while you drive the lead team. Then, when both you and the horses are feeling more comfortable with the hitch, start taking the lines for the wheel team as well.

Problems driving tandem teams – Before making a turn at an intersection, you will be well back when the lead team needs to start making the turn. Often, your vision will be obstructed. It also takes more time to harness and hitch four horses. And, with tandem teams, you rarely get full use out of every horse in the hitch.

Advantages to a four-up- It's a fun hitch to drive and attracts a lot of attention. It's no wider than a standard two horse hitch. The four-up is the easiest of the tandem hitches to drive and rarely jack-knifes. I like it so much; I drove it for 6 months on my first journey.

Larger Teams

The best hitch to use when you need more than four horses on the road is the Six-Up. This is three rows of two horse teams. You'll have a lead team, a swing team and a wheel team. This is generally the largest

team of horses that a single person could be expected to care for, harness, hitch, and drive on the road. The evener for the lead team is fixed to a chain which attaches to the pole and runs between the swing team horses. With a team this large, you're right at the limit of what you can do on a day to day basis. Jimmie Walker, an old friend of mine, used to harness and hitch a six-up by himself; but it's a difficult task that can be fraught with danger. The problem is that you need someone to hold the teams that are already hooked up while you bring fresh ones to the front of the hitch. Also, when coming up on an intersection, your eyes are positioned about 35 feet behind the lead horses. This results in a very limited field of vision when making a turn.

The lines run in your hands between your fingers, with the lead teams towards the top, the swing team in the middle and the wheelers near the bottom.

With pulling line slack, holding six horses and getting them all to mind it's a lot of work. But, if you can do it; it's really, really, cool!

The Holdback

Only horses that are connected via their chest straps to the front of the wagon pole can act to holdback, or back up a wagon. Most of the time, this means that only the horses on either side of the wagon tongue can hold back a wagon; except, when a double pole arrangement is used for a three abreast hitch. Then, if all three horses are connected with a neck yoke (or sometimes chains), to the poles, they can use their legs to either hold back the wagon on a downhill or back the wagon up.

If you have a four-up hitch and a 7000 pound wagon, everything will work out fine on either flat ground or going uphill. However, on a steep downhill, you're going to need brakes. With only two horses on the pole, they won't be able to hold back a 7000 pound wagon for any hill steeper than about a 3 or 4% grade. Even for shallower grade hills, they can only do it for a limited period of time, before their legs turn to rubber. This is the primary reason I emphasize the importance of two

independent brake systems. Having a wagon push your horses down a hill will result in one of the worse wrecks you can have!

Preventing Runaways

The number one rule when it comes to runaways, don't let them get started. There is a period of time (about 1 to 5) seconds long when a horse is assessing a possible danger and deciding whether he should run or not. During this time he will assume an alarmed posture – head up, neck arched and ears sharply pointed in the direction of the perceived danger. This is when the teamster has to be quick and act right away – shut him (them) down. At this point in time you still have the ability to control your horse (as long as he is standing still or just walking). Haul back on the lines, stopping the horse(s) and talk calmly to him (them). Fear is infectious. If they sense fear from you or their teammate it will add to their own fear. If you are the leader of the herd, they will start feeding off of your calmness. In the meantime, they'll be dancing around and acting like fools (usually over nothing). Let them dance and continue to talk calmly. Let them come to grips with whatever the problem is, just don't let them run. Once they start running, you have almost no ability to stop them with the lines and very little directional control. You can only stop them when they have run themselves out. This normally takes about a mile on flat ground. The next time they see something that looks scary, they're twice as apt to run; because, now they 'know' that they can run away and solve their problems.

Scary Things

There's an old question – What scares a horse? The answer – Who the heck knows? Generally, something big and loud like a piece of construction equipment will have no effect on them. However, a plastic bag caught in a wire fence might be visualized as a monster from hell. Often, what frightens them is unexpected motion they detect with their peripheral vision. Two situations when I really look out for trouble are;

llamas, and those times when a horse is half asleep in the harness.

Llamas and Alpacas are very curious animals that often appear scary to horses. When you pass a herd of llamas, they frequently run straight up to the fence along the road to check out the horses and wagon. What the horses see (with the monocular vision from one eye) is a bunch of long necked; hairy creatures running directly at them in a pack. Their immediate action is to run away from the problem. The best thing to do about this is to camp at someone's farm that has llamas. Familiarity breeds contempt.

Another potential problem comes out of the clear blue when you're plodding down the road in the late afternoon. A tired horse will sometimes nearly fall asleep when they're pulling. (I once had a mare totally fall asleep; then fall down while she was pulling). The danger comes when the horse is in that half-awake stage and they are shifting from binocular vision (with two eyes) to monocular vision (with one eye) – or vice versa. When that occurs, they sometimes see a hairy monster that isn't really there. They can go from almost a dead sleep to a dead run in about three jumps. The key to this situation is to always be ready for something. Shut him down before he completes the first jump.

Caring For the Team

For all their strength and size, horses can also be very delicate creatures. They can withstand cold quite well, but in hot weather, they overheat quickly. They also have a very simple digestive system that can quickly turn on them and cause severe problems. As most horse owners know, you have to be very careful in how you feed and water a horse to prevent colic and founder. With all the time I've spent on the road, I've never had either one of these problems, so I'll share what I do and hope it helps others.

Watering, Mineral and Cooling Down

There's an old saying – Always water before you feed. In addition to that – never water a hot horse, especially with cold water. Normally, my team has free choice of water each night and before we drive in the morning. If it's not an especially hot day, the only water I give them during the day is at lunch time. To make sure they're not too hot when I water them, I use the time to unhitch and unbridle them in order for them to get cool. Then I'll feel their chest to make sure they're not too hot. On an 80 degree day, each horse will usually get about 3 gallons of water at lunch. After they have had their drink, I'll grain them.

In the evening, they cool down while I un-harness them. Then, if they're not too hot, I'll give them water, but I'll wait at least five minutes after they've had their first bucket, before giving them all they want.

If it's not too hot out, I give them mineral salts about once a week. In hot weather they get it much more often. But, the only time I give them salt is when they have unlimited water to drink. Also, in very hot weather, I'll give each a half tube of electrolytes during the day.

If you have it, a garden hose is an excellent way to cool down a horse. Try not to do it too fast. Start with their feet, then their chest. Avoid spraying cold water on their kidneys (just forward of the hindquarters) as this will cramp them up.

When it's really hot in the day and the horses are hitched up; I might give them each no more than a gallon of water to just wet-their-whistle. Make sure the water is not real cold or it will cramp them up.

Feeding and Rest

For all their size and ruggedness, horses have simple and somewhat delicate digestive systems and are primarily designed to eat grass. The healthiest feed for them is rather poor quality (low protein and

carbohydrate) grass or hay. More roughage and more exercise after they eat is a good way of keeping them from having a bellyache. Now, having said that; it's also difficult to keep enough calories in a horse that's on heavy haulage.

In a natural state, a horse will spend most of the hours in a day, alternately eating and sleeping. I try to replicate that by ensuring they get a lot of little meals throughout the day, with a few naps in between. When pulling wagon down the road for 10 to 12 hours a day, it's difficult to get enough calories in your animals, while still giving them enough sleep, and not make them sick. At the end of the day, it's not uncommon for your team to be too tired to eat their hay or graze. Without concentrates, it's very difficult to keep the weight on them.

Along with their oats, I try to feed a couple ounces of common vegetable oil. Fat calories are good for a horse and helps prevent EPSM (a common muscle disease in draft horses).

In all my years of driving, I've never had a sick horse and they have kept their condition. This is what I do:

Breaks - Since a horse in the natural state takes a lot of catnaps throughout the day, I let them. I usually take a ten minute break every hour. Any longer and their muscles will start to stiffen up. But ten minutes will rejuvenate them and you'll end up getting more out of them. Besides, it's a good time to have a cup of coffee or a beer.

Lunch - I always take an hour for lunch. I unhitch the team and take off their bridles. After giving them 2 to 3 gallons of water, they each get about 5 pounds of oats. I feed oats because it supplies the grain calories, but it is still roughage. Horsemen have been safely feeding oats for centuries. I've never heard of a horse getting colic from oats, but I have from sweet feed. Then, they get a chance to take a little nap to start the digestion going. After I finish my lunch, I put their bridles back on and hitch them back up. The afternoon pull gives them the exercise they need to finish the digestive process. As a bonus, I get a lot of energy right after hitching them up from the carbohydrates turning to blood sugar. Always water the horses before graining.

Evening Meal - After stripping off their harness and brushing them down, I build their evening electric pen and turn them into it. After they get a chance for a good roll, I give them their first watering (about 2 or 3 gallons each). Then, I toss them their evening hay or let them graze for a while. Fifteen to thirty minutes later, they get unlimited water. Then I give them their evening grain (about 5 pounds of oats apiece). If I'm haying them, they get all of their hay in the evening. If I try feeding hay in the morning too, most of it would go to waste.

Breakfast - There's usually not time to feed hay in the morning, so I only water and grain. Again, each horse gets about 5 pounds of oats. Not long after hitching up, they get another sugar buzz to start us down the road.

Days Off - If a team is in top condition, about every 4 to 7 days they should get a day of rest. They need this both physically and mentally. If you work them too many days without a day off, they'll let you know. If you start off driving horses straight out of the pasture, they'll initially need every third day off. As they start getting in shape, you can start stretching that out. After about 6 to 8 weeks, they'll be close to their peak physical shape.

Every 4 to 8 weeks, plan on taking a solid week off to rest the team. During this time, give them free choice grass or hay, but reduce the amount of grain they get by half. This is a good time to put some pounds back on the team.

In summary, horses on heavy haulage need to be fed about 2% of their body weight each day, much of it in concentrates. Spread the food out during the day, along with several opportunities for them to take a nap. If a bale of hay goes bad - don't feed it. It's better to have a hungry horse, than one that gets colic and dies from bad feed. If you have to feed sweet feed, do it in the morning or at lunch, when they can work it off. Try not to feed it at night. Legume hays like alfalfa and clover can be fed when they're working, but if they have a longer downtime, try to feed straight grass hay. *Note there are other methods for feeding a horse – this is what works for me.*

Brushing/Currying

Your team should be curried and brushed every morning and night. Use this time to check them for sores. Pay particular attention to the top of their neck and to their shoulders. It's much better if you treat a sore or a rub early. If you don't have a lot of time, at least brush out their shoulders so bunched up hair doesn't give them a collar sore.

Hoof Care

Proper hoof care is probably the single most important thing you can do to maintain the health of an animal that is hauling a load down the road. My granddad used to always say, "When you're judging a horse, start at the hooves and work your way up." Healthy hooves will keep you going down the road. If you get a lame horse, your journey is at a complete stop until it is healed.

Every morning and night, you should pick up each hoof and inspect the shoes to determine: if they are worn, loose or cracked. Ensure there are no stones lodged under the shoe or alongside the frog. Another thing to look for is roofing nails. On my third journey, I twice had a horse pick up a roofing nail in the sole of a hoof. When attached to small pieces of shingle, a roofing nail will often fall out of a truck and land point up. Treatment for this is to pull the shoe off. Pull out the nail and enlarge the puncture some with a hoof knife (for drainage). Then doctor it with a drawing salve. Re-shoe the hoof with a pad for protection.

Blankets and Shelter

When a horse is on good feed, the only time I've seen one cold is when there is a cold rain or when there are subzero temperature and a wind blowing. For either of these occasions, you should travel with all-weather type blankets. Usually, this is all the shelter a horse needs to stay

warm. On the other hand, don't blanket a horse unless it's absolutely needed.



If you're expecting an icy rain, all-weather blankets provide a lot of protection.

Shots/Coggins Tests/Health Certificates

There are different requirements for each state, but generally, if you annually have a Coggins Blood Test and a certificate of good health for each horse, you should be fine. There are some states that have more stringent requirements, but that is the exception rather than the rule. Having said that, I have never been asked to produce any documentation for the horses, but tomorrow is another day!

Preventing Lameness

There are dozens of things that cause lameness; and lameness is the primary symptom of many others. I'm not a veterinarian, nor is this a book about how to provide veterinarian care. If you have any questions, always seek a professional for help.

Since most lameness originates in the hoof, the easiest way to keep you team sound is to take care of their feet. Also, a good way to prevent many road injuries is to generally keep your team at a walk. It may seem like you travel more miles at a trot, but I've found that in the long haul, you'll make just as many miles at a walk. If you trot them for four hours, or walk them for eight, you'll end up covering the same amount of ground. However, at a walk they'll stay a lot healthier.

Road Founder - In addition to picking up rocks and nails, another common occurrence with horses traveling down the highway is 'road founder', which is a bruising of the frog. The best way I have found to prevent it is to keep the frog trimmed back. Whenever I re-shoe a horse, I use a knife and my nippers to trim back the excess growth. It's hard to discriminate between road founder and a gravel (abscess) in the hoof. If the frog is long, I'll test for it first by pressing down hard with my thumb. If I suspect road founder, I pull the shoe, trim the frog way back, and re-shoe with a pad under the shoe. The horse will then normally be sound within 24 hours. In my travels, the only lameness I've had with the horses has been road founder and this treatment has cured it both times.



Bill's hoof, re-shod with a pad after having a case of road founder.

Gravel – Is an abscess in the hoof is caused by a piece of dirt, mud or stone entering through the hard sole of the hoof and getting into the sensitive inner sole. This is not very common for a well shod horse that

is traveling down the road. I see this most often in horses that are standing in a paddock, especially if the ground is muddy. Most of the time you can find a gravel with a hoof tester. Treatment is to evacuate the point where the abscess has occurred with a hoof knife, then apply a gauze dressing with a drawing salve on it. After a couple of days, re-shoe the horse with a pad. Last winter, my big gray gelding picked up a gravel that I never found. Sometimes they will rupture out the coronet band by themselves. His never did appear to surface; but, after about a month, it just seemed to disappear.

Leg Injuries – A lot of lower leg injuries can be prevented by wrapping a horse's legs. When I first started ponying Bill, my energetic gelding, I had to wrap his front feet because he was banging them on the trailer as he was being led. After a while, he smartened up and it wasn't a problem. Another common leg injury is from over-travel, where a hind leg strikes the heel of a front leg when the horse is moving down the road. You can buy bell boots for riding and draft horses at www.meadersupply.com. Both bell boots and leg wraps help prevent over-travel injuries. Other causes of leg injuries include; kicks from other horses, and wire cuts. Clean wounds and apply an antibiotic ointment.

Veterinary Care

Sometimes it's necessary to see a vet for animal care; however, in my travels, I've rarely had to pay for vet care. In fact, several times, I've had veterinarians pull over and offer me free supplies. Some of the vet supplies I carry include; sulfa type antibiotics, antibiotic cream, bute and bannamine pain killers, tranquilizer, a small suture kit, drawing salve, gall salve, gauze pads, a gauze roll, vet wrap and a hoof tester.

Horses on good feed, with a lot of exercise rarely get sick. I try to limit their exposure to other animals, water troughs and buckets. This helps prevent exposure to disease. If an animal gets a runny nose, I immediately start it on a treatment of sulfa antibiotics to knock out any bacteriological related infections. To administer the sulfa pills, I grind

them to powder, and then mix the powder in molasses syrup, before pouring the syrup in their grain.

Preventing Sores

When a team is working every day, they constantly need to be checked to ensure they're not picking up any sores. Neck, shoulder and britchen sores are the most troublesome.

Neck sores – These are sores that develop on top of the neck, under the collar. If caught early, remedies exist to prevent this type of injury from developing into something really serious. I inspect daily for neck sores, usually waiting for an opportunity to make my examination when the horse's head is down for drinking or grazing. If one starts to develop, I'll do one of the following:

- Change collars to one that is smaller or larger, so that the collar rubs the top of the neck in a different spot.
- Sew a piece of sheep's skin in the top of the collar
- Reduce the weight of the wagon pole on the neck.

A bad neck sore is one of the most limiting injuries that a horse can get. Once it gets to be a deep wound, it can take months to heal.

Shoulder sores – The key to preventing a shoulder sore is to catch them early. The best prevention is to have a well fitted collar, with a vinyl covered foam collar pad. The advantage to this type of collar pad is that it doesn't hold sweat and salt as much as a cloth lined pad does. Salt is one of the major causes of shoulder sores. If a sore looks like it's starting to form, you can switch to a different collar size, or pad the collar with a piece of sheep's skin. When using this remedy, I use the hames to hold the skin in place. Also, treat the rub or sore with Bickman's Gall Salve.



Gall on Doc's shoulder. This sore was in a bad spot, so I rested Doc for a week while it healed up. During this time, the two Belgians had to do all of the pulling while Doc was a bum, walking behind the trailer.

Britchen sores – these commonly form when the britchen is not adjusted properly (usually too tight). If a sore starts to develop, readjust the britchen, so that it rides in a different spot, then pad the britchen. The best pads I have found are automotive, shoulder harness type pads, made from simulated sheepskin. They close with a Velcro strip and are available at Walmart, in the automotive section.

Shoes and Shoeing

One of the most important requirements for traveling in a horse drawn wagon is a well shod horse. When a horse's hoof interacts with pavement, there is wear to both the hoof and pavement. If not shod or otherwise protected, within a couple of days, a hoof would wear enough to leave the horse lame. Even regular steel horseshoes are not rugged enough to stand up to this kind of work very long. After about 4 to 5 days of travel, a ½ inch thick steel horseshoe will wear out and need to be replaced. To get a horseshoe strong enough to last for any length of time, it's necessary to coat the underside of the shoe with borium or drilltek (tungsten-carbide) chips. Horseshoes treated like this are called hard-surface shoes, and usually last for about 12 weeks (two shoeings).

Most Ferrier's apply borium or drilltek to the underside of

horseshoes by brazing it on with a torch. The hard surface is applied at three points; the toe and both of the heels. I purchase hard-surface shoes that are already made up, from:

Graber Steel and Fabrication
8528N 900E
Odon, IN 47562
(812) 636-7733

Nick Graber came up with a process for applying the tungsten carbide chips with a wire welder; and is the only one in the country to do so. If you call Graber Steel to order your shoes, they'll take your charge card over the phone and UPS them right out. In 2010, I paid \$38 for a set of four draft shoes.



Graber, hard-surface horseshoes. The Tungsten-Carbide is applied with a wire welder. I estimate that these shoes last 25% longer than the shoes that have the Drilltek brazed on them.

Horseshoeing

Learning to shoe your own horses is a very helpful skill to have. It can save you a lot of expense and grief when traveling with a team of horses. There are Ferrier schools that teach this, or you can apprentice

yourself out to a Ferrier to learn how. Several years ago, I wrote the following article to show the basics on how to shoe a horse. **WARNING** – don't attempt this yourself without first getting some additional training.

Horses have to have new shoes every 5 to 8 weeks for 3 primary reasons: the hoof grows downward about 3/8 to 1/2 inch in this time, the shoes wear & the nail heads wear.



In this article I'm resetting Joyce's front shoes and putting new ones on the rear.



1. The first step is to remove the old shoe. In these next two pictures I'm doing that. First I cut the old nail clinches (when the shoe is put on the ends of the nails are folded over to hold the nail on).



In this picture, I'm using a tool called the pullers to remove the old shoe. I start at the heel of the shoe and pry it upward a little. Then I start pulling the nails out. In the end I pull the shoe off. Pull in with the pullers so you don't rip off a piece of the outside hoof wall.



2. Then the hoof has to be prepared for the new shoe. Basically, I have to trim away about $\frac{3}{8}$ of an inch of old hoof. Here I'm using a hoof knife to cut away excess frog (the fleshy V in the bottom center), I also cut a $\frac{3}{8}$ inch deep channel about $\frac{1}{2}$ inch from the edge of the hoof. This is so my nippers can trim the hoof wall back. I also scrape away a little bit of the sole towards the middle. There are two hoof knives, one for the left hand and one for the right. The left hand knife I'm using has the cutting edge closest to me.



3. Then the hoof wall is trimmed with the nippers. You have to be very careful here to trim it so you will have a flat hoof. The toe seems to grow faster than the heel, so only trim about $\frac{3}{16}$ " from the heel and trim on a slant, so you trim $\frac{3}{8}$ " to $\frac{1}{2}$ " at the toe. If you take too much hoof from the heel, it will cause the horse's heel to drop, stretching the large tendon in the back of his leg (flexure tendon) and cause him to go lame.



4. After the wall is trimmed, the hoof is rasped flat. This is done so that the shoe has a flat surface to sit on. It also gives the final shape to the hoof. For a final shape you want the horse to be balanced over his feet, with both hooves the same height. Angle is important too. The outside of the hoof should slant up at a 45 to 55 degree angle.

Some Farriers don't use a rasp. They still do it the old way where they just press a hot shoe on the hoof so the shoe will sit flat.



5. Since I use horseshoes with toe clips, I'm cutting a notch for the clip. Many horseshoes use quarter clips or no clips so this would not be necessary. This picture shows the white line (about 1/4" below my nippers). The inside of this line marks the line between the hoof wall and the inner sole. When hammering in a nail it has to go to the outside of the inside of the white line. If it went inside, the nail would hit the inner-sensitive sole and the horse could go lame. If you do this by accident, you'll see blood. Pull the shoe, heat a rod and cauterize the wound.



In this picture, Joyce's right foot (your left) is ready for a shoe and her left foot is not. You can see that the right hoof is shorter, she's more up on the toe (like she should be) and the hoof is balanced and carries her weight equally.



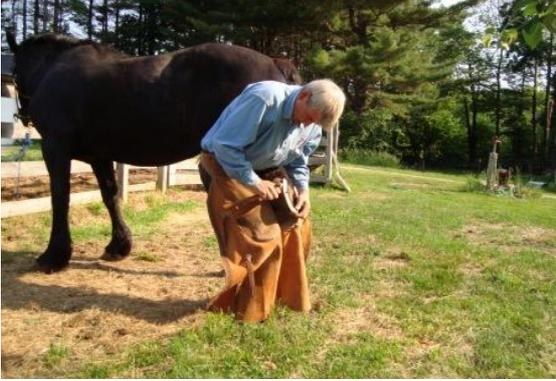
6. Here I'm fitting the new shoe for her foot. Since, I'm resetting this shoe, I didn't have to do anything. On her rear shoes which were new, I had to use a hammer to bend the shoe in about 3/8" to make it fit. It's easier to bend horseshoes hot, but if you're careful, you can bend them cold. The nail holes for the properly fitted shoe should line up with the middle to the outside edge of the white line on the hoof.



Before we nail on the shoe, I wanted to explain a little about shoes and nails. The heads of the nails are tapered, as are the insides of the nail holes on the shoe. This allows the shoes and nails to wear and still keep the shoe in place. The heads of the nails have a side with a burl and a flat side. The burl always points to the inside of the shoe. This is because the nail tips are slightly curved so that the nail wants to drive away from the inner sole and come out the outside of the wall.



7. Nailing on a shoe can be quite a trick the first time you do it. The shoe has to be held in the right spot. The nail has to be held straight and you have to swing the hammer (all with two hands). Drive the nails straight in (with the burl on the nail head towards the inside of the hoof). Make sure the nail point comes out the outside of the hoof.



After the nail is fully seated, use the claw to twist off the excess point protruding from the outside of the hoof. This is important. If the horse has to put his foot down, a protruding nail point can slice you open pretty good.



Here you can see the hoof with two nails coming out each side (I later added a third nail to each side). The points are twisted off. To ensure that the nails can firmly hold the shoe on, I'll have to clinch the nails (bend over the protruding ends). You can also see in this picture the old nail holes (located lower on the hoof as I trimmed off about 3/8" of old hoof.)



8. I use a hammer to clinch the nails. Most Ferrier's use a clincher and I have one too, but mine isn't big enough for draft horses, so I usually hammer clinch the nails. This works better on a hard surface like a driveway.



9. Using the back of the rasp to file away excess hoof wall (hanging over the outside of the shoe.) I have Joyce's foot resting on my knee. Most farriers today use a little stand, but I'm doing it the old fashioned way.



This is the finished product.



Draft horses tend to wear out their rear shoes faster than the fronts (especially the outside edges.) This is because most of the force used to pull a load comes from the hindquarters. Riding horses usually wear out the front shoes faster as $\frac{2}{3}$ of the horse's weight is on their front feet. Trotting a horse on pavement will cause shoes and bare feet to wear much faster. Here is a side view of the old and new rear shoes after six weeks of moderate road work pulling a wagon.



From left to right, the tools are:
1. Small claw hammer for nailing shoes. 2. A large hammer for shaping shoes (a forge and an anvil help, but a hammer and any hard surface will make do.) 3. Clinchers 4. Left and Right Hoof Knives 5. Rasp 6. Nippers 7. Shoe pullers

In summary, horseshoes with a hard surface coating are necessary to keep a horse's hooves healthy when going down the road. If I lose a shoe, I immediately stop and re-shoe the horse. A barefoot horse will grind his foot down enough to make him go lame in just a short period of time.

There are exceptions to this rule for using hard surface horseshoes. Ron Dakota made horseshoes by hand from old bias-ply tires (I don't know how long they lasted). And, Lee the Horsellogger runs his horses barefoot and only used Easy Boots on the horses about 30% of the time. He uses a process of trimming his horses to a natural hoof to allow them to run barefoot most of the time

Grazing Horses

Grass is the natural food for horses. When available, always take advantage of some free grazing. It will cut back on your feed bill, you won't have to haul so much hay, and horses love to graze. Even grass that appears brown and dried out is nutritious and can provide good feed.

There are three basic techniques for grazing your horses when on

the road. First, you can use a portable electric. I have an electric fence charger mounted on the back of the wagon. I carry about (20), 3 ½ feet long aluminum stakes that have a rubber coated pigtail on top. With these, I can layout a 100' x 100' enclosure in just a few minutes. Close to the wagon, I position two poles, about 4 feet apart to form a gate. Through the loops on the poles, I string 3/8" nylon rope (wound on a plastic reel) that has metal filaments imbedded in it. Reaching my gate posts, I leave four foot of rope left over to form the gate. The leftover rope and the reel I bring back to the wagon to connect to the fence controller. To ground the fence controller, I push in another stake and run a ground wire to the stake. With practice, the fence takes about 10 to 15 minutes to construct. Care should be taken to not have any sharp corners in your enclosure and to make it no narrower than 50 feet. That way, if one horse chases another away, they have room to get out of the way without going through the fence.



Roadside Camp in New Mexico. The horses are grazing inside a portable electric fence that is constructed with insulated pigtail posts and electric 3/8" rope.

The second method is to piquet the horse with a long rope to a metal stake that is driven into the ground. CAUTION, a horse has to be trained to be grazed in this fashion. The danger is that the horse will be brought up short with the rope caught behind one of his rear heels. The untrained horse, will then flip out and pull the rope tight enough that he will get a very nasty rope burn on the back of his heel.



John McComesy's mules, on rope and stake piquets at a camp in Mississippi.

The third method is to use a fenced enclosure that is offered to you by a host. This is a great method to use, but there are a couple of precautions that you have to take. First, there shouldn't be any other horses in the paddock. Horses tend to throw a few kicks when introduced to each other and you don't want your animals or your host's animals injured. Also, other horses can pass diseases to your team. Second, ensure that the enclosure is sound and doesn't have wire or obstacles that

could injure your team. Finally, the paddock should not have an existing water trough that has been used by other horses. These also act as carriers of disease.

Interacting With the Public

One of the really nice things about traveling with a team, is to see your horses interact with the public. In this day and age, most people don't get an opportunity to meet, pet, feed, or even sit on large horses. But, the most important thing is safety. Before you let anyone near the team, you have to be absolutely certain that people are not going to get hurt. The more you work with and get to know your team, the better you'll be able to judge when a situation is safe. If you feel the situation is a safe one, here are some general guidelines to help keep things that way:

- 1) When a horse is hitched up, never let someone sit on him, or stand in front of the team. If the horse got excited and tried to bolt, someone could get very seriously injured. When hitched up, keep people to the side.
- 2) Watch your horse's moods and the surroundings. If the team is calm, tired, and there is nothing around that could alter that mood, then, it's probably okay to let people approach.
- 3) When feeding treats, make sure kids are supervised and know how to hold the treat in a flat hand, so they don't accidentally get their fingers bitten.
- 4) If you're at a school or other large gathering, don't let the people crowd your horses. Always unhitch, then, lead the horses one at a time to the people. Keep the people in front of the horses and not off to the side or behind them, where a turn by the horse could knock them down.
- 5) Every horse is an individual. You have to judge how a horse could

possibly react in any situation. Default to the safest situation possible.

Having said all of that, I would also like to mention that large draft horses are docile by nature and like to be petted and fed treats. Generally, they are careful around small children, the old and the infirm. Psychologically, I believe they think of them similar to how they view colts in a herd.



Horses are very tolerant and gentle around the young, old, disadvantaged and the infirm. At a stop at a school for developmentally challenged adults, the team was very patient and careful. Once, at a nursing home in Texas, I had a 95 year old, retired rancher drive his electric wheel chair completely under Doc!



Lined up for pets and treats

Horse Training

A perfectly trained horse will rarely remain so if they are not given occasional reminders of how they are suppose to behave. I've included this section in the book to provide the teamster with some pointers on how to deal with potential problems before they develop in to real trouble.

The rule of thumb when dealing with horses is – be kind, but firm. There's no democracy in a horse herd. While they appreciate a calm and reassuring voice, as the leader, you have to command both obedience and respect. Like children, most horses will constantly test you to see how far they can go. 'If you give them an inch, they'll try for a mile.' Remember, the most important trait in being leader amongst horses is attitude. Even though they're bigger and stronger than you, if you act like you are the boss, they'll generally accept you as such. But, all the while, treat them with respect due to their size and strength and keep an eye out so you don't get hurt.

Round Pen Training

Round Pen type horse training was first published (or made famous) by the trainer Monte Roberts. This 'Join-Up' type technique is

extremely effective and has pretty much replaced the old - 'ride him until he don't buck no more' techniques of old. It's quicker, less stressful and easier on the horse and trainer, then most techniques used in times past. There are a lot of variations, but the principal is the same – Use a horse's own social behavior to teach him what you want. It's a lot faster than teaching them the English language first.

The basic principal behind this form of training is to quickly rearrange the social structure that exists between the horse and trainer (in horse terms). Before the training, there may be an unclear social tie between the two. Anywhere from fifteen minutes to four hours later, the horse will accept the trainer as the senior member of a herd that consists of just the horse and trainer. To accomplish this undertaking, the trainer will replicate the actions of a lead horse in a herd by repeatedly chasing away a junior member. By doing this in a small, round enclosure, the horse can only escape so far and has no corners to hide in. This allows the trainer to apply a steady pressure on the horse. It doesn't take long for the horse to start 'thinking' under these conditions. Within a very short period of time, the horse will surrender his social position and make submissive gestures to the trainer. At that time the horse will have 'joined up' with the trainer and act submissively towards him or her.

Round Pen training begins with the horse and trainer in a round enclosure that is 40 to 75 feet across. The best training pens have solid walls, or are otherwise free of nearby distractions, such as other horses in the vicinity. When the trainer walks to the center of the pen, the horse will probably try to keep his distance and move to the outside wall. I like to carry a coiled up lead rope or a buggy whip in one hand, in case I need to add emphasis to an arm motion or possibly extend the reach of my arm. By walking at a slight angle towards the animal's hindquarters, a raised arm is usually enough to get the horse moving forward, along the rail of the pen. The more pressure the trainer applies (by moving closer) the faster the horse will move away. By staying positioned off the hindquarters, the trainer continues to apply a 'chasing' pressure by maintaining the specific distance required to keep the horse moving at a trot. As the trainer is near the center of the circle, he or she doesn't have near as far to travel as the horse moving along the rail.

After a few minutes of this, get the horse to change direction by changing the angle at which the pressure is applied. Step towards the front of the animal, and raise the opposite hand. As the horse slams on the brakes, say, “Whoa”. Before he spins and starts moving in the other direction, say, “Get-up”. After a couple of turns around the pen, turn him again by using the same method. Continue to ‘chase’ the horse away, turning him every two or three times around. This will continue until the horse starts to signal that he’s ready to ‘join up’.



Round-penning the Belgians - As old Amish farm horses, neither had ever been ridden. After fifteen minutes in the round pen, Bill was ready for a ‘join-up’. Five minutes later, I was in the saddle and riding, without so much as a single buck. It took over an hour of chasing Bob around the round pen until he was ready to ‘join-up’. Each horse is a little different.

As the trainer continues to move the horse around the ring, a subtle change will begin to happen. First, his eyes will start to follow you, waiting for you to step to his front and say, “Whoa”. Then, his tongue

will come out and he'll start licking his lips. This means that he's thinking about what is going on. Finally, He will come to a complete stop. If he doesn't get pushed at this moment, he'll lower his head and start slowly walking towards the trainer. This is the join-up; and it's a magical moment. With little effort, no stress, and very little time, the horse accepts the trainer as being the dominant 'horse'.

At this moment, I like to nonchalantly reach up, pet the horse on the neck and say a few kind words. Then I slowly walk around the horse. He should stand still while the trainer 'looks him over'. Then I walk back to his head and pet him again. Near his head, I face away and say, "Get-up", then start walking across the ring. The horse should be following right behind, much like a dog that has been commanded to heel. As you come to a stop, say, "Whoa" and he should stop as well. Walk around in this fashion for a minute or two, and then end the session on a good note.

Join-up training works well for a green horse, or one that you have been working for a while. On the green horse, it's the first step in his training. Before moving on to other things, I like to go through one to three more join-up sessions. With a horse that has been previously worked, join-up sessions are an excellent opportunity to reestablish discipline with a horse that has been 'pushing it', and doing things like; not listening to your commands, crowding your space, or displaying some other form of behavior that's not submissive. In order for it to be effective, don't let the horse turn-in unless he has been keeping his eye on you and has licked his lips. If he hasn't done both of these things, keep chasing him around the pen. This form of training always works; sometimes it takes four minutes, sometimes four hours.

The standard form of join-up training is used to teach obedience and respect, but there are variations used to teach other things.

Round Pen Training – Desensitizing for touch

Begin this session as a normal join-up, but as the horse runs around in a circle, use a lariat to lasso him around the neck. (If you can't throw a

noose, just place it over his head). Instead of pulling the noose tight, leave it slack. Start the horse moving around the pen and as he gets used to the rope, start snaking it around, using your wrist to allow a coil to settle over the neck, withers or hindquarters. As the horse grows used to each variation of the rope's position, add another twist. This lets the horse get used to the feeling of things touching different portions of his body. The value of this training will be shown the first time you try to harness or saddle the horse. If done immediately after feeling the rope, he will be very tolerant of things like a harness being placed on his back.

Round Pen Training – With Driving Lines

I also like to use a set of driving lines in the round pen. When commands from the lines are coupled with verbal commands, it's very effective at teaching the fine points of driving. Some people believed that to prevent a horse from getting a 'hard mouth', a trainer should never start him with a bit. Over the years I've learned that it is okay to use a bit, just go easy on the lines and be careful not to overdo the amount of pressure. To ensure you don't yank on his mouth too hard, learn to 'feel' the horse's mouth through the lines.

Ground Work, With a Lead Rope

Several years before I started traveling, a young Swiss girl showed me how to use a lead rope to achieve some startling results in horse training. This technique works really well and doesn't require anything but a small area of open ground. The idea is to quickly put the horse through a series of maneuvers such as spins, backing up and forward movements. Change from one request to the other, commanding an instant response from the horse. For instance, for a left spin from a walk – change hands holding the lead rope from the right to the left, move quickly to the horse's side, then start spinning him to the left (one or two revolutions). If you have to encourage him to spin, use some finger pressure, with the right hand pressing on his left flank. After doing a left spin, straighten to a walk, and then go into a right spin. I like to use finger pressure behind his left shoulder to encourage him to turn right.

After a couple of spins, walk him forward a couple of steps, before backing him up. Sometimes I lean into the lead rope to get him backing up; sometimes I hold both ends of the lead rope up high and back him with a combination of voice commands and gestures with the lead rope. Repeat this cycle three or four times.

Most of the time, a lead rope snapped to the lead ring on a halter works fine. For difficult horses, you can use a stud chain (small chain with a snap, attached to a leather strap). The chain is passed through a side halter ring, then either over the nose or under the chin, before snapping on to the opposite side halter ring.

The big advantage of doing this type of training is that it can be done off-the-cuff and it's very quick. A five minute impromptu training session will really turn a horse around that is starting to cause problems. When I'm on the road, I normally have to do this with one of the horses, every few weeks. If one of my animals starts crowding me, or not listening too well, a few minutes of ground work will really change him around.

Obedience Training While Hitched Up

When the whole team is being lazy, acting up, or just not listening to me, I have another trick in my bag – I give them obedience training while they're hitched to the wagon. This works really well when you have a handy parking lot, or other large area to maneuver in.

Take about 15 minutes to put the team through a series of sharp turns, side-steps and backing up. I like to practice backing into parking spaces and doing a lot of figure-8's. Another good maneuver is to keep them from moving forward or backward, while side-stepping from the left to the right, and vice versa.

When I was driving a four-up on the first wagon, this was a very effective way to get all of the horse's tuned up and listening to what I had to say. It was also a lot quicker and easier than trying to work with four horses, individually.

Desensitizing

This is the process of getting a horse used to things that bother him. Basically, the idea is to introduce the animal slowly (and in a controlled fashion) to scary things like; traffic, gunfire, bridges, llamas, and umbrellas. What usually scares a horse is something that is new or unexpected. There's an old saying, "familiarity breeds contempt." If a horse wants to run when he sees an umbrella, the worst thing you can do is to let him. As the 'leader' of the horse herd, your calm voice and demeanor will help settle a frightened animal.

If I wanted to desensitize a horse to umbrellas, I would tie the animal securely, then have someone else open up an umbrella while they were standing a couple of hundred feet away. Talk calmly to the horse while the person with the umbrella works themselves closer and closer. If given some time, the horse will become used to the presence of the umbrella and will no longer consider it a scary thing. He will become 'desensitized' to them. Caution; be careful about standing too close to the horse when introducing him to new things. An excited animal is likely to run you over when he's trying to get away from something that frightens him. Remember, horses are prey animals and are always on the lookout for something that may eat them.

Desensitizing a horse is getting a horse used to something that frightens him in a controlled fashion. Give him enough time and he'll usually figure out that things aren't as scary as they first seemed.

Summary

Your team is what will make or break you when you travel down the road. As long as they're in good condition, you can travel. A Teamster is someone that cares for their team and gets the most out of them, while maintaining their health and well being.

Chapter 5 - Road Travel

In addition to the teamster, wagon and team, there yet another ingredient for successful wagon travel – the road. This includes; how to travel safely, selecting a route that can be navigated, obtaining the necessary supplies; and most importantly, dealing with the people you meet along the way.

Safety

A couple of generations ago, it was not uncommon to see a team of animals pulling a wagon down the road at three miles per hour. In the twenty-first century, a slow moving vehicle is quite out of the ordinary. The vast majority of drivers zooming down the road at sixty miles per hour expect that everything else on the road is doing a comparable speed. This fact necessitates that the teamster makes every effort to maintain public safety and the safety of himself and his team.

Warning devices like signs, flashers and flags help a lot, but equally important is selecting the best possible travel route and time of travel. If a particular road doesn't feel safe, it's probably because it isn't. I could recall several instances to support this fact, but here are a few that I will share:

In 2008, I was traveling through Ohio on a US Highway. Traffic was fairly heavy, but the team was handling it fine and most, but not all, drivers were courteous. A few miles down the road, I was passed by a truck traveling at a high rate of speed. The trucker seemed oblivious to oncoming traffic, and came within inches of colliding head-on with a vehicle that contained a woman and two small children. This really shook me up. I took the first side road and got off the highway. By all

rights, travel on this road should have been safe, but not all drivers were acting in a safe manner.

In 2009, while traveling US 84, in Mississippi, a four-lane, divided highway, with light traffic, my wagon was struck by a semi-truck, traveling at over 70 mph. The resultant collision was catastrophic, and nearly cost me my life. A few days earlier, I had a premonition that this wasn't a safe road to travel, but ignored it, as the detour would have cost me several days of time.

In 2010, I set off to travel US Highway 50, down the Arkansas River Canyon. Having previously driven the route in a car, I knew it would save me over a week of travel time; but I also recalled something of the road conditions. The highway is tucked between the Arkansas River and a steep canyon wall, with many sharp curves. Most of the route has virtually no road shoulder. Driving the team east, through the canyon, for two or three days, I would often be tucked up against the canyon wall and invisible to traffic from behind. The more I thought about it, the more I was convinced that the route couldn't be safely navigated. Finally, I was certain that this road couldn't be traveled without causing an accident. So, after driving several days out of my way, I turned around and headed in the opposite direction. To this day, I'm firmly convinced I made the correct decision.

When selecting a route of travel, choose one that will provide as much safety as possible. Trust your instincts!

Road Grades - Up Hill

The steepness of a road grade is directly proportional to the amount of draft required to get a wagon up a hill. If you keep your wagon weight light enough for the team pulling it, you should be able to climb fairly long hills with a 7% grade, and shorter ones with a 10 to 12% grade. This will allow you to travel most major roads in the country. However, on back roads, it is not unusual to encounter roads with 15 to 20% grades. Unless your wagon is really light, your team will not be able to pull up these hills.



When roads were designed by surveyors, rather than by wagon travelers-of-old, then can result in some steeply graded hills.

This hill on a back road in Ohio, while only 150 feet long, was pitched with a grade greater than 15%. It might as well have been 2 miles long; the horses couldn't pull it. Fortunately a friend with a truck and helped tow it up the hill.

Unfortunately, the steepest hills are found on the back roads. This means, that quite often, horse and wagon travel is restricted to major state, and US Federal Highways. These roads also have the most traffic, so you're often in a dilemma as to which route to choose. Usually, this results in selecting the highway for travel.

The number one question you will have for people when asking about various routes is, "How steep are the hills on the route?" When asking locals about which route to choose, beware of always trusting their opinions. People who drive cars are usually poor judges about the steepness of hills.

In the wagon, I carry a chain and industrial strap, used to lift large loads. Both of these devices come in handy for towing the wagon up a hill by a pickup truck. Often, I'll connect the strap to the tip of the pole and use both the horses and the truck to pull the wagon up the hill. This method is quicker than unhitching, but requires good communication between the teamster and the truck driver.

If you're looking at computer maps and trying to decide about which route to take, the flattest roads will generally follow train tracks. In the United States, most railroads are limited to a 3% grade hill.

When climbing a hill with a team of horses, it's important that the horses don't get 'blown'. If they start breathing hard, pull over and let them catch their breath. The rest period may only be 2 to 10 minutes long, but will be much longer if their breathing become real laborious and they get exhausted.

For smaller hills, it's often possible to jog or even canter a team to the base, and let inertia carry it part way up the hill.

Traveling 10 miles of real hilly terrain may take as much out of your team as if they had pulled the wagon for 20 miles across flat ground – plan accordingly.

Road Grades - Down Hill

With good brakes, going down hills is usually not a problem. But, if the hill is steep enough and you lose your brakes, a very dangerous situation can result. Only the horses that are connected to the pole have the ability to hold back a wagon on a hill. As such, they have a limited ability to hold back the weight. If it gets too heavy for them, they quickly start moving faster and faster. Almost before you know it, there's going to be a very bad wreck.

On very long hills, constant brake pressure will quickly start to overheat the brakes. If the brakes overheat too much, the linings will begin to lose their ability to stop the wagon. Also, the brake fluid temperature and pressure can increase to the point until the cast iron wall of a brake wheel cylinder bursts, resulting in a complete loss of braking action. To prevent this, you need to stop every few minutes and let the brakes cool. The longer the hill, the more stops you'll have to make.

Once, on a 7 degree pitched hill, where I descended 2000 feet in elevation, I had to stop six times to let the brakes cool. Each stop was for 10 to 20 minutes long. All the while I was headed downhill; I was anticipating a brake failure and what I would have to do. The instant I had a brake failure, I intended to sharply turn the wagon and wreck it against the side of the hill. I knew if I waited more than 1 or 2 seconds, I wouldn't be able to do this, as I would be going too fast. Option two was to hall back on the lines so hard, I would drop one or two of the horses in their tracks. Fortunately I didn't have a failure on a large hill and didn't have to take one of these extreme measures.

For this reason, I recommend that a wagon should be outfitted with separate and completely independent front and rear brake systems. This includes separate master cylinders, lines and brake pedals. An advantage to this system is that you would rarely have to stop and let the brakes cool; you could just shift from using one set to the other. While using one set of brakes, the other could be cooling.



A couple of friendly local guys helping with brake repairs in New York State. Deedee my old gray wheel mare, fell asleep while walking down the road. When she fell down, I had to jam the brakes on so hard I broke them.

Shoulders and Rumble Strips

The nicest way to travel is on wide and paved road shoulders. Whenever possible, I take full advantage of a shoulder. But, like everything else, there are some problems with shoulders. First, they are

seldom wide enough to accommodate the full width of the wagon – use whatever is available. Second, shoulders usually disappear when you cross a bridge. Third, there is often debris in your travel path, to include broken glass. Finally, most highways now have rumble strips on the shoulders. These are great and save a lot of lives, but they're hard to drive around when you are traveling down the side of the road. If I can't fit in the outside edge of the rumble strip, I usually straddle it with the wagon wheels.

Of course, shoulders are not present on all roads. Often you'll have to travel in the traffic lane. The advantage to traveling on major state and federal highways is that more often than not, there is some form of a shoulder, even if it's only a couple of feet wide.

Bridges, River and Rail Crossings

Surprisingly enough, most horses have little fear of crossing a bridge that is paved in concrete or asphalt. When they first step on to a bridge, the sound and feel is different, but they quickly become used to it. Metal expansion joints of the bridge can be an obstacle as horseshoes tend to slide on the metal surface. The biggest problems with bridge crossings are that the traffic lanes are often more narrow, and the traffic delays you will cause while crossing. On a five mile crossing of a wetland in Arkansas, my friend John McComsey said he once held up traffic for an hour and a half.

Going under a highway bridge can often be more challenging than going over one. Horses tend to fear things that are higher than their head. The first time you go under a freeway overpass and trucks are overhead, it can bring about some tense moments.

The most difficult bridges to cross have steel planking or are planked with a steel grating. I don't recommend taking a green team across one of these bridges. I had some very tense moments trying to take my four-up across a narrow, steel planked bridge in Vermont. When the hooves of the lead team hit the steel planking, the loss of traction and

the sound of the horseshoes on steel, frightened the horses. For about 2 minutes, they just danced in place as I calmly talked with them. Finally, they started moving forward, but walked as if they were on egg shells.

Most railroad crossings are not too difficult. But, the ones I watch out for are the rails that cross the roadbed at an angle. Horses have a tendency to not step across the rails, but instead try to follow the track at an angle. Also, don't try to hurry across the tracks to beat the train.

Going under a railroad bridge can also be challenging. The major problem is that many of the rail lines in the country were put in before the 13' 6" height standard for today's trucks came in to being. Generally, low rail crossing are not marked on maps or GPS units. This can result in a lot of back tracking if you encounter a low bridge.



Moving on to the overpass crossing Interstate 70, in Indiana

Cities

Generally, I try to avoid large cities. My rule of thumb is – if an urban area will take more than a day to cross, I avoid it. While city travel is not too difficult, it's hard to find a good place to camp with the team. Twice I've had to camp in the middle of a city with the horses. The first time was when on the first journey when I was crossing Erie, PA. It was getting near dark and I hadn't yet cleared the western suburbs. I did what many Americans do when they really need something – I went to Walmart. The store manager was more than happy to let me pull out back. It wasn't the best camping spot, but it worked in a pinch. The second time was in Mansfield, OH. Again, it was getting near dark and I hadn't cleared the city. That time I camped on a piece of grass, adjacent to a 'Free Mason's' temple.

The team usually does pretty good when traveling through cities. We stop at traffic lights and change lanes just like cars. Parking lots make good places to pull over for lunch or to take a break. Expect a lot of people to stop by and visit.

One of the joys I have with driving the wagon is to introduce the horses to kids and old folks. When moving through large cities, I like to drive the horses through the poorer section of town. It's a real treat for the people. In this day and age, for most city dwellers, seeing and petting large horses is a rare event. When an inner city kid gets a chance to do so, you create memories that will last a lifetime.



Inner city kids get a chance to meet large horses. Battle Creek, MI - 2009

On the night before crossing a large city, I try to camp as close as possible to the urban area so I have enough time to cross the town on the following day. If you have enough time to get through a city, it can be a real blessing to the residents.

If you are navigating through a large city, try to avoid rush hour.

One of the best tools to navigate through an urban area is a GPS unit. I have one mounted on the console of the wagon and it is invaluable. I usually keep it in the map mode and just use it as a moving map display. If at all possible, try to use streets that run parallel to major roads as there will be fewer traffic backups.

Traffic

The biggest problem with traffic is when you start backing it up. Not only are people delayed, they get frustrated with the delay and are apt to do something stupid. Whenever possible, I try to pull over and let backed up traffic by. To reduce the chances for a traffic backup, try to time your passage through cities or busy highways to avoid rush hour traffic.

Generally, horses quickly get used to moving through traffic. However, drivers of cars are not necessarily used to moving around horses. If traffic starts passing too close to the horses, it's often necessary for the teamster to become a road hog. An example of this is when there is only a small shoulder and traffic still tries to squeeze by in the available room between the oncoming traffic and the team. If they are getting too close, move over and occupy the entire traffic lane. Then, the cars must wait until there is no oncoming traffic to pass.

Back roads versus highways

Generally, I choose to travel on highways. Back roads never seem to go very far without encountering obstacles like; steep hills, rivers or mountains. But whenever I can, I'll jump on back road to get out of traffic and relax for a while.

One of the best ways to find good back roads in by purchasing one of the map books for a state that shows all the back roads. These work great and let you easily plan out a day's travel.

In most of the United States, it's illegal for a horse drawn wagon to travel down most Interstates. There are also some major highways that look like interstates, but are not listed as 'Limited Access' or have minimum posted speed limits. I try to avoid these as well. People driving Interstates or roads similar to them don't expect their travel to be interrupted by a slow moving vehicle. They set the cruise control and

‘zone out’. Another hazard to this type of road is found when crossing bridges. The shoulder narrows down and almost disappears when going across bridges.

In the western United States, it is legal for slow moving vehicles to drive down certain Interstates. This is because in some places, there are no other roads. Check with local law enforcement before driving these highways.

How Far to Travel

It’s not uncommon for people who haven’t traveled by horse and wagon to over-estimate the distance that can be covered in a given period of time. When my team approaches top physical condition I plan on traveling 20 miles per day, 100 miles per week, or 400 miles per month. With a team that hasn’t been worked in a while, initially plan on only about half this distance. While greater distances can be achieved for a shorter period of time, much more than this will result in the animals losing flesh and being more prone to injury.

Once a team starts losing physical condition from being worked too much, it takes quite a while to get that back in to shape. The teamster needs to keep a sharp eye on his horses to ensure they’re not being driven too hard. I primarily look at two things:

Horses’ Weight – All horses will get lean when you’re used every day on heavy haulage; that’s normal. If you can visually see more than two or three ribs, it’s probably time to cut back on the work and increase the amount of calories (this is a general guideline, as body type will vary from horse to horse).

Look in their eyes – If you’re hitching up in the morning and a horse still has that tired look in his eye, he probably needs some time off.

Not often realized is how mentally exhausting it can be for a horse pulling in traffic. Imagine that your car has broken down alongside the

freeway and you have to make some on-the-spot repairs. As the traffic zooms by you at 70 mph, the close passage of the vehicles quickly becomes exhausting. This is how it affects the team.

Rest for the Team

Even if the team is pulling some easy roads, they still can only pull a certain number of days before they have a day off. In addition to physical rest, they need some time to just relax and be horses.

Depending on the number of hills, amount of traffic and how long they have travelled, a well-conditioned team should have one day off every four to seven days.

In addition, try to plan a whole week off every four to eight weeks. Not only does the team need this, it's good for the teamster as well. During their week off, I give them free-choice hay or grass, but reduce the amount of oats by one half. It's normal for a draft horse to regain about 50 pounds of weight during this time frame.

The best way to rest the team is to find a host that has a large pasture. A horse's idea of Nirvana is wandering around in a herd, on acres of sweet grass.

Supplies

The primary concern with supplies on a wagon trip is ensuring that your teams has enough feed and water. People supplies are a little easier to come by. I try to plan my route of travel such that I have an opportunity to resupply as I run down the road. The supply quantities shown below are for 2000 pound horses. If you're driving horses that are half that weight, reduce the amount by half.

Water

When the temperature is 75 degrees F. or less, plan on giving a minimum of 15 to 20 gallons of water, per horse per day. So if you

expect to be in an area where you might go two days and two nights without water, and you are traveling with two draft horses, you need to carry a minimum of 70 gallons of water.

When traveling in the eastern United States, I usually carry a one day's supply of water, while in the West; I carry enough for two or three days. Most gas stations and homeowners are happy to offer travelers water to refill containers.

A general rule of thumb is; if the water isn't good enough for people to drink, don't give it to the horses.

Hay –

If pasture isn't available, you'll need hay. Every day, I count on feeding about 30 pounds of good quality hay to each draft horse. In the winter time, it might be necessary to hay the horses each day. To carry a week's supply of hay for two draft horses, you'll have to make room for about seven bales. However, if you're traveling in the late spring or summer, there might be enough grass available so that little or no hay is required.

Any good-quality grass hay will usually work, but legume (clover or alfalfa) hay will provide considerably more feed value. When the team is working hard every day, clover or alfalfa will keep them in better shape, with considerably more energy. However, when they're not working, grass hay is healthier.

Everyday, horses requires roughage, usually in the form of hay or grass. This keeps their digestive systems working properly. To feed concentrates without some form of roughage is asking for trouble.

Since you obviously can't carry more than a few days' supply of hay at a time, it might be wise to time your travel to ensure that there is an abundance of grass. 2011 was a drought year in the American Southwest, so hay supplies will be limited the following year. When I head north for Montana in 2012, I'm going to start my journey north from Colorado to coincide with the arrival of the spring grass. This will

reduce the amount of hay I'll need to find while on the road. Native Americans often waited for springtime, until grazing was available for their ponies before they went on the warpath.

If hay is in short supply, and grass isn't available at all of the potential campsites, another technique, used by Gypsies can be used to feed the team. Remove the horses' overhead check lines; then every time you take a break, allow the team to graze on the roadside, while they are hitched to the wagon.

Most people who own horses are pretty good about offering free hay to the traveling teamster. On my first journey, lasting six months, I only had to purchase hay once. Usually, a pickup truck with a few bales on it would swing by, and a gracious person would offer me a gift of hay.

Grain –

While hauling down the road, I usually feed each draft horse about 15 pounds of grain a day. Along with some vegetable oil, this provides enough calories to keep them from losing weight. For a team of two draft horses, plan on feeding about 200 pounds of grain per week. This may seem excessive, but not for horses that are working every day. If you want to keep flesh on your team, you'll have to grain them a lot.

Oats, whether they are whole, crimped or rolled seem to work best. They provide the required calories, with far less chance of getting a sick horse than you would from other types of grain. Oats also keep well and are consistent from place to place as you travel.

Grain is one of the major expenses I have when traveling. I usually find that grain elevators or country feed stores are cheaper than going to the chain-type farm supply stores.



A gift of grain from some kind people at a roadside park near Dover, Tennessee - 2009

If I stop at a farm in grain growing country, quite often I received gifts of grain. Sometimes this was a couple of sacks of ear or shell corn. Every time I gave the horses' their oats, I would toss in two or three ears of corn. Being ex-Amish horses, they know how to take the whole ear in their mouths and roll it around while they use their back teeth to shell it. When they have picked off every kernel, they would spit the cob out (except Bob, he likes the cobs too).

People Supplies –

Often, I will tie up or unhitch the team and do my shopping at regular stores. When I pull up in Walmart's parking lot, the team will attract a lot of attention, so I have to be prepared to handle a crowd of people who want to chat. Typically, I'll buy enough groceries to last a few days.

I also get a lot of donated food, to include steak dinners delivered to a camp on the side of the road. When I was traveling south, through Indiana, Kentucky and Tennessee, I must have been following the blackberry harvest. After accepting my fifth jar of donated blackberry preserves, I started re-gifting them.

Availability of Supplies –

When I first started journeying, I used to constantly worry about running out of supplies. Now, other than trying to swing by a population center every few days, I am usually not concerned about it - things just have a way of showing up!

Meeting People

One of the nice things about traveling by horse and wagon is that you don't have to go out of your way to meet people, they come to you. There is nothing quite like a team of good horses to help break the ice. If you're friendly and receptive to their advances, the public is really interested in hearing about your travels and what it's like to drive a team.

A common theme is for a families and individuals to pull over on a shoulder and be waiting for the wagon to approach them. If you're pulled over for a break or to have lunch, people will often stop by to chat and see the team. Often, I've had folks that have been following my travels on the internet, drive hundreds of miles to greet me.

The old and young are especially attracted to the horses. Older folks remember when they were younger and worked horses on the farm. Kids get a kick out of meeting my gentle giants. It's a rare occasion when I don't pull over and let the kids and old folks rub their noses or feed them an apple. This sort of thing also has a tendency to condition the horses. When they see a group of people standing alongside the road, they quickly learn to automatically pull over, all by themselves. One of the joys of being a wagon horse is the numerous pets and treats they get throughout the day.

All of my horses enjoy having people sit on their back. So, as long as they're tied up and not hitched up, I let them. Bob is okay as long as he only has one or two people sitting on him; but neither Doc nor Bill care how many are up on them, as long as they can fit. However, I'm always careful to judge the situation and ensure it is safe.

Finding a Place to Camp

Finding a place to camp each night is a little different in the Eastern United States than it is in the West. In the East, a teamster is usually restricted to camping on property that is owned by others. This involves either being asked by someone to camp on their property, or asking permission. In the West, I camp about $\frac{3}{4}$ of the time on public land; usually on a large right-of-way along the road. Both ways have their advantages.

Half the time I end up camping on private property, it's because I've been invited by someone to do so. Usually, during the day, I'll meet someone who asks if I want to stop for the evening at their farm or ranch. I really enjoy visiting with this type of host. The biggest problem with this type of invitation is that the host is frequently out of the way. Often, people don't fully appreciate how long it takes to travel somewhere by horse and wagon. For instance, it's not unusual to receive an invitation to a house that's only '5 miles down a side road'. Most folks have a hard time with the concept of a ten mile, round-trip journey being a half day's travel. For this reason, I usually restrict my visits to folks that are located within two miles of my intended route.

Staying with a host is a rewarding experience and ends up being it's a win-win situation. We both end up departing with our lives enriched from the experience. I receive a comfortable place to spend the evening, enjoy their company and get a close hand look at some really interesting families and cultures. They get something new in their lives, stories of a diverse world and different lives, and a chance to meet some really great horses.



Farms, Ranches & Horse properties are the best places to camp. The Belgians, enjoying a good roll in an uncut field of alfalfa and clover. With great hosts, water and an electric hookup, this was an ideal spot. Albany, IN – 2009

It's amazing what constitutes a good place to camp. I've stayed at farms, ranches, peoples' manicured yards, grocery stores, bars, VFW's, Legions, Mason Temples, restaurants, business's, parks, arena's; you name it. Almost without exception they have been great places to stay.

If, I need to find a place to camp and I have to ask for one, I look for a likely spot. First, I try to find another horse owner or a farm. If that doesn't work, I look for a place with some open ground with long grass. Second, I need a wide spot to pull over while I go up to the house, or a circular driveway to pull into. Finally, I go up and knock on the door. Generally, about 80 to 90% percent of the people I ask agree to let me camp at their place. Usually, before the night is over, we end up being the best of friends.

In the Western United States, most of the roads have large right-of-ways, often more than 100 feet wide. If I haven't been asked to camp somewhere, I just look for the nicest piece of grass and pull over. If I want company that evening, I look for a place that has a place where cars can also pull over. Usually, someone shows up before I have the first horse unharnessed.



Camped on the roadside right-of-way, Colorado - 2010

Donations and Folks Wishing to Help

Throughout my travels, I am forever encountering people that wish to donate something to help me with my travels. Without asking, good people everywhere want to provide me with food, horse feed, time or money. Not long after I started journeying, I learned an important lesson – when someone offers me help, I should be gracious enough to accept it.

Not doing so, leaves the gift bearer feeling bad and is akin to turning down a Christmas present. I learned the best thing I can do is to accept the gift graciously. In return, I give what I can to them, and to society as a whole. Gifts that I freely dole out are: hope, inspiration, a sense that they have helped someone that needs it, a chance to interact with some really great horses, and being part of something that is exciting and adventurous. Whenever possible, I try to visit schools, nursing homes, and homes for the disadvantaged. I let people pet and sit on the horses, ride in the wagon, and I just talk to folks. To sum it up – I want the world behind me to be a better place than the world in front of me.

Good People/Bad People

The vast majority of people in this world are good. In fact, I would venture to say that 99% of people in this world are good. They live much as you and I, with friends, families, jobs, hopes, dreams and desires. Most folk would do anything for their families, just about anything for their friends, and are usually willing to help a stranger in need.

I know evil exist, but only know so from watching television or seeing it in a newspaper. It's my personal belief that evil is really quite rare. In all my travels, I have yet to me a bad person. I've met a few that are indifferent, and a few that are misguided; but none that are truly evil.

I once had an Amish man visit me at the wagon in Northern Indiana and we talked about this subject. He said, "I told my wife that I was coming to visit you; and she cautioned against it, because she thought you might be a bad man."

With a puzzled look, I asked him, "Why then, are you here?"

His bearded face broke into a grin and he replied, "I told her that bad men don't usually drive around in horse-drawn wagons".

Dealing with Law Enforcement

From time to time, a wagon traveler has to deal with law enforcement. By far, most of these encounters are very positive, with the police asking if they can provide assistance in any way they can. Occasionally, a police officer is unclear if I am breaking a law by driving a team of horses down the road. And rarely, they are convinced that what I am doing is against the law. With this last type, I have to reply, “Officer, in every State in the Union, a horse and wagon has at least as much right to the road as a car; usually more.” Then, I soften a potential conflict by saying, “Public safety is my number one concern. I really want to make sure nobody gets hurt. Could you possibly help me by showing me an easier route; or driving behind me with your lights on, etc.?” With that last line, I turn a potential adversarial situation into one in which he can now do something positive, such as coming to the assistance of the public. Most cops are there to help. The idea is to get them to help, or to leave you alone, without making a conflict situation.

Media Coverage

When you drive a horse-drawn wagon, you will get media attention. In this world of mostly negative news, a positive story is a good thing. When people can open a newspaper or turn on the TV and see something that makes them smile, the world ends up being a better place.

I treat the ladies and gentlemen of the media well, and try to give them a good story. Not only is it positive for readers and viewers, it’s also helpful to me, generating a base of support, often before I get to an area.

But, there are times when it gets a little out of hand. I remember a day when I was passing through Upstate New York when I had more than my share of media attention. Beginning in the morning, I was visited by

a whole parade of reporters throughout the day. Before I made camp that evening, I had given two television interviews, talked to three newspaper reporters, and had a Satellite Radio interview.

Most of the time, journalists are well intentioned, but they often don't get the facts straight. This is primarily due to the fact that they generally have short deadlines to meet. Of the hundreds of interviews I have given, about a third are very factual, a third have minor errors, and the remainder get a lot of the facts wrong. My advice for the teamster is – don't worry about it.

Blogging

The internet has evolved into an incredible communication tool, allowing thousands of people around the world to follow and become part of a teamster's travels.

A broadband data card, plugged into the computer allows the traveler to post periodic updates to a website. Most areas in the Eastern United States now have good 3G or 4G coverage, providing internet coverage wherever the teamster travels. In the West, there are still large areas that have no cell phone or internet data access. In 2011, Verizon appears to offer the best nationwide internet access.



Uploading my daily blog while passing through an area with good internet data coverage. Shelbyville, IN - 2009

Summary

The previous chapters provided information to help the teamster prepare for travel on the road. The four essential ingredients to successful travel are: the Teamster, the Wagon, the Team, and the Road. It can be argued that anyone of these is more important than the other, but all are vital considerations for the success of the journey.

For the final chapter, I've decided to write about a few outstanding days I've had on the wagon. To be fair, not every day of travel is as memorable as those described. I do however, have a common thought each morning – 'I have no idea how this day is going to turn out, but I know it's going to be a great day'!

Chapter 6 - Stories of the Road

To help consolidate some of the knowledge from the first few chapters, I decided to describe in more detail my travel by horse and wagon. Included in this chapter are accounts of six different days of travel. The first two stories took place as I was on my first journey, traveling from Deerfield, New Hampshire to Mississippi. The stories for the remaining four days took place several months after the first wagon was struck by a semi-truck in Mississippi. After acquiring a new wagon and team, and completing some shorter journeys throughout the summer, I was then off on a grand trip to the American West.

1. Cavendish, Vermont; September 5, 2008
2. Two Schools in One Day; Nettleton, Mississippi, February 4, 2009
3. The Amish of Farmers, Indiana; November 23, 2009
4. Mighty Miss to Little Miss Prodigy, Perryville, Missouri; December 11, 2009
5. Slick Rock Hill, Colorado; May 6, 2010
6. High Altitude Horses; Lizard Head Pass, CO; June 16, 2010



Camping in the Sneffels Mountain Range, June, 2010

Cavendish, Vermont

On September 5, 2008 I had just started my first journey by horse and wagon. Two and a half weeks previously, I set out from Deerfield, New Hampshire with a wagon and four Percheron draft horses. Like many first time travelers, I was off to a slow start. The wagon was heavy, the team was not yet in shape, and I had a lot to learn.

As I woke to the predawn sound of chirping birds, there was a long moment of confusion as my brain tried to sort out where I was and how I got here. Looking out the window at the back of the wagon, focus returned as I took in my serene setting. I was in a horse-drawn wagon, camping with the horses on a small Vermont farm. Craning my neck, I could just see the backs of two the horses as they grazed inside the portable electric fence.

The previous day had been one of rest for me and the team. After climbing through the hilly terrain of Western New Hampshire, crossing the Connecticut River, then climbing out of the river valley, they were ready for some well-deserved rest. After flagging me down on the highway, Jane, my current host, had invited me to detour the wagon and rest the team at her farm, a mile off the main road. My day off was spent giving a class on horse care to a group of home-schooled children, going for a horseback ride with some friends and enjoying the peaceful surroundings.



An interactive class on horse care with home-schooled children

‘It’s a travel day’, I thought. ‘I have to get up, feed the horses and start breaking camp’.

As I rolled out of the sack and started going about my morning chores, I knew the day would be a busy one. But, then I remembered that I would have guests riding along for the first part of the day, so I picked up the pace. I was fairly new to wagon travel, so I had to keep running through a mental checklist of everything I needed to do to get this show on the road. ‘Hmm’, I thought, ‘First I have to grain the horses, then wash up and feed myself, then make the bed and straighten up the wagon, then tie the horses to the wagon, then breakdown and store their electric fence, then brush the team and check their feet, then harness them up’. The list seemed daunting, but I hopped right to it; knowing that the best way to - eat an elephant, was one bite at a time.

I was harnessing my second mare when Mark and his little daughter Sara showed up. Cute little Sara had been one of my students the day before and I invited her, and her father to ride along for the first part of the day. She pitched right in and helped me harness up the remaining horses. After I threw the harness over Dolly, a very calm

mare, she assisted me by passing the quarter straps and belly band under Dolly so I could fasten them.

With everything stowed, I drove my wheel team into place, connected up the neck yoke to their chest strap snaps; then walked behind to attach the heel chains. ‘Let’s see’, I thought, ‘on Deedee I drop four links of chain, and while on Joyce I only drop two’. I was fairly new to travel and was still experimenting around with how tightly they were hitched to the pole.

Up in the front of the wagon, Mark held the lines for the wheel team while I went to drive my lead team ahead of the wheelers. As I stepped between the two teams to pass the lead team’s driving lines through line guides on the wheel team, I was glad I had someone to hold the lines for my two mares on the pole. There are a few minutes of time, when sorting out the lines, when the teamster is really exposed to danger. If the wheel team moved ahead, I could easily be run over with no place to escape.

Holding the end of the lead team’s lines in my hands, I stepped into the wagon and started sorting out all four lines in my hands. Releasing the parking brake, I said, “Joyce, Deedee, Dolly, Doc; get up there”. As always, Doc led the show, snapping the wagon forward as he surged into his collar.

The mile long drive back to the highway was over a narrow, hilly, gravel road. I had my doubts as to whether the horses could pull up a steep hill and they proved correct, as the team bogged down about a third of the way up. Not to worry – my host was standing by with her pickup truck, just in case we couldn’t make it up the hill. It was only a moment’s work to run a chain from the hitch on the truck, between the lead team to the end of the wagon tongue. Then, with the horses and truck pulling together, we marched up the hill.



Mark with his daughter Sara riding in the front of the wagon. Sara was all smiles as she got to hold Clementine, my poodle on her lap. I was just beginning to appreciate how the wagon could create many wonderful, lifelong memories.

After passing over a few shallow hills, our route down the highway entered a narrow valley. The road followed a river valley as it wound through the wooded countryside. Sara was a virtual chatterbox as the team moved steadily down the highway, following the clear rushing waters of Black River.

Once an hour, I stopped the horses alongside the road and let them take a ten minute break. While parked in the gravel turnouts, car loads of people would often stop to talk and take pictures. Sometimes conversations dragged on and it was fifteen or twenty minutes before we got back on the road.

About an hour before lunch, Mark's wife pulled up in a car to give my guests a ride back to their car. It was with a heavy heart that I

watched them drive off.

However, before I could pull my rig back onto the highway, an elderly gentleman with a gray beard pulled up, climbed out of his ramshackle old truck and walked over to the wagon. “This is absolutely the coolest thing I have ever seen”, he said, as his hand stroked the mass of hair growing on his chin. “I now know what I’m going to do with the rest of my life”.

With hardly another word, he climbed back in to his truck, put it in gear and crept away at about twenty miles an hour. I never caught his name, but I sometimes wonder, ‘Did he build his wagon; or did the next day reveal something even cooler’? I guess I’ll never know.

At lunchtime, I pulled the wagon off on a wide spot in the road. It took about fifteen minutes to unhitch the teams, take off their bridles, water and grain them. After setting up a small folding table and a chair, I grabbed a sandwich, some fruit and a can of beer; then set outside and soaked in the stunning beauty of the countryside. I was tempted to stay right here forever in this incredible location; but I knew that soon this balmy, late summer setting would be replaced with the harsh weather of winter. “No”, I sadly reflected, “I have to keep traveling down the road”.



A tranquil lunchtime setting, Black River, VT, September, 2008

The beauty and peace of my surroundings delayed the afternoon drive, as I wanted to languish all afternoon in my chair by the river. But, after a lot of procrastination, and a second beer, I bridled the horses, hitched them up and got underway.

Traffic on the highway was fairly light, and there were plenty of opportunities for cars to pass, so I didn't create any large traffic jams. With the curves on the road only allowing cars to travel at around 45 mph, there was plenty of time for the vehicles to slow down when they saw my flashing yellow strobe light.

Around 2 pm, I pulled in next to a solar power retail store for an afternoon break. After seeing my solar panel on the front of the wagon, the owner came out and we chatted about alternative energy. We both agreed that the price of solar energy was coming way down, and that sometime in the near future solar power will be a cheap alternative to what we have today.



Stopped beside the Solar Energy store for an afternoon break.

By the time I got near the town of Cavendish, it was getting to be later in the afternoon. I started looking around for a host to camp with. The mostly wooded and public lands that I have been traveling through didn't present many possible places, so I hoped the town had something to offer.

Just before entering town, John and Ann showed up with a gift of four bales of hay. As I only had two bales remaining, stowed on top of the wagon, it was very welcome. I offered them a ride on the wagon as we drove through town.

All the way through town, I didn't see anything that looked promising as a potential place to camp. However, on the far side of the village was a large, old, glimmer stone mansion that had been converted in to a bed and breakfast. Admiring the beautiful setting, I thought of myself and the team relaxing in such gorgeous surroundings and pulled

over to give it a try.

After a few raps with an old brass door knocker, the owner, Tim Jefferson, opened the door and said, “Can I help you?”

After introducing myself and telling him how I was traveling around the United States by horse and wagon, I asked him, “So, I was wondering if you have a place we can stay?”

“Well, I have rooms in the inn available”, he replied.

Realizing that I wasn’t communicating on the same wavelength as the polished gentleman in the doorway, I said, “No, sorry I didn’t make myself clearer. What I meant to ask was, would it be possible if I could pull my wagon and horses on to the piece of grass, over by the barn, erect a small portable electric fence, and camp for the night?”

Just then, I think he finally looked up and realized that four very large horses were standing in his driveway. He took half a step back, had a startled look on his face, and then quickly stepped out on to the porch to gaze in wonder at this unusual sight.

“Well ... yes”, he stammered.



Camped at the elegant Cavendish Inn – The horses and I never had it better.

For the following two days, the team and I basked in comfort. Tim was a world class chef and prepared some of the best cuisine I have ever eaten. That night, he invited me up to the Inn for a meal centered on a really good beef brisket and served with an excellent bottle of wine. Yup, the team and I had landed in paradise!

Two Schools in One Day

Near the end of my first journey, on February 2, 2009, I was traveling through Northern Mississippi when I was fortunate to be the guest of Jimmy and Debbie Gray in Nettleton, MS. It had been nearly a week since the team had a day off in Michie, Tennessee, so I was really glad when we were invited to spend an extra day with this fine family.

After traveling nearly a hundred miles, the horses were ready for a little rest. When we're on the road, they don't get nearly enough time to nap and socialize. So like a school kid who stays up too late at night, they use days off to catch some extra sleep.



Dolly with an unusual pose as she caught a nap on the hay pile

After I got my laundry done and did some maintenance to the wagon and harnesses, I managed to catch a little relaxation time myself. Few things are as comfortable as sitting in the sun with a good book and a cup of coffee.

In the afternoon, my host, Jimmy, drove me in to Tupelo so I could pick up some grain and other supplies.



Doc really knows how to make the best of an afternoon nap

For our day off, the horses had a nice two acre paddock, located to the front of the house. When horses spend most of their time working, they really know how to enjoy their off time. If offered a beer and a lawn chair, I'm sure they would accept and put them to good use. But, it's just as well I don't go to that extreme as they would be a little hard on the furniture. I can always tell when they need a day off. They get this tired look in their eyes and they'll start acting up. In a lot of ways they're like kids that have been up too long at night and need to go to bed. When they still have that tired look after a day off, I know it's time where I have to give them an entire week off to relax and just be horses for a while.



On my day off, I spent a lot of time with the Gray's grandson, Tyler. He is a fine boy that likes to have a lot of fun.

All too soon, the day of rest was over and it was time to hit the road. However, before leaving this great community, I had a couple of stops to make with the team.

My first stop was at the Nettleton Elementary School. By this time, I had visited several elementary schools in my travels. They were among the most rewarding experiences of my journey. The kids really enjoyed the visits and learned a lot more than they would from attending a normal class. For them, it's like a really good field trip, without having to leave the school.



Talking with the kids at Nettleton Elementary. All the children had an opportunity to pet the team and feed them snacks. Deedee, who is being held by Jimmie Gray has a young lady sitting on her. Only a few kids had an opportunity to sit on the horses. Usually, I selected the shiest children or those that were disadvantaged in some way.

The most important aspect of visiting a school like this is the safety of the kids. After tying the team to the side of the wagon, I would lead the horses individually to the kids. I made sure the kids were lined up and stayed to the front of the horse, so they wouldn't get knocked down.

When I have classes like this, I talk a lot about horse care and behavior. Then, I let the kids ask questions – they usually ask some pretty good ones.

My next stop was at the Happy Hearts Daycare Center. This was an opportunity for the little children to see some horses. I'm sure they had a lot to tell their mom's and dad's that evening!



Doc and Dolly greeting the little children at the Day Care

Nothing is as rewarding as introducing some really nice horses to kids and old folks. The memories created can last a long time.

As a side note – A few weeks later, I was recovering in a hospital bed from injuries I received when the wagon was struck by a semi-truck. Both the Nettleton Elementary School and the Happy Hearts Day Care sent me a large box of Get Well cards. They went a long way towards lifting my spirits and helping me recover.

The Amish of Farmers, Indiana

On both the first and second journey with the wagon, I had driven by a small Amish community, located off state route 67, and never stopped in. On the third trip, Denise, my traveling companion for Trip #3 and I needed to get a leather halter repaired at the harness shop. So, as we drove by the community we stopped in.

I pulled up to the harness shop and asked Ed, the owner if he could sew the halter. He said it would be no problem. It was getting late in the day, so while he was working, I asked him if there was a nearby place where we could camp. Extending his hospitality, he not only agreed we could park there, he also offered up a paddock for the horses.

While we were getting the horses unhitched, his son in law stopped by and invited us over for supper. Supper at the Lehman household was really nice. To give you an idea of how it is like in an Amish household, here are some of the highlights: There are no electric lights, but propane gas lighting is just as bright. The houses generally have both hot and cold running water. The houses are clean and modern, with propane providing most of the power, to include the refrigerator. There is no TV - but who really cares. As people of the Amish faith generally read a lot, there are bookcases, lined with books. Kids are polite and don't interrupt adults when they speak.

Families are generally large, so expect a big dining table. Grace is said before meals. Take a modest portion and pass the food around. If there is enough for seconds, it will come around again. Pennsylvania Dutch is generally spoken at home and German is spoken for church service. If there are English present (non-Amish) then English is the language that everyone uses.



Camped next to Ed's harness shop

Because our cultures are so far removed from each other, many Amish people have many misunderstandings of 'English' culture as we do of Amish culture. After the dishes were cleared and the kids were playing in the living room, my host, his wife, Denise and I talked about this.

My host was a little surprised that I seemed so comfortable with Amish culture, so I explained, "My father and grandfather were both raised on farms that used work horses and had no electricity. Sitting here at your table is exactly how it was like when I was at the dining table on the farm when I grew up."

With a puzzled look on his face, he asked, "Why then, are the two cultures so far apart?"

I replied, "Because it's not in the living memory of most people alive today. One to three generations ago, most people in this country lived a life style that is very similar to what the people of Amish faith live today. But, those memories are the memories of their fathers and grandfathers; not memories of their own. Today, most of what we know

of each other's culture comes from reading what others have written. Amish people read the newspapers and get a false negative impression of English folk. English people (non-Amish) read tourist guide books.”



All three of my lads were former Amish owned horses, so they felt right at home.

The next morning, Denise and I got a tour of the Lehman cabinet shop. My evening host and his brother had a very modern business that made high quality kitchen cabinets.

The cabinet shop was also where their church group met. Most Amish church groups are comprised of 10 to 15 families, and the location for the church service is rotated to different households. The cabinet shop offered a lot of space, so the Lehman's church service was always held there.



A horse, hitched to a wagon outside the Lehman Cabinet Shop

The night that Denise and I were camped at Ed's harness shop, his wife went to deliver Ed's 60th grandchild. Before leaving for dinner at the Lehman's I gave him a copy of the "Wagonteamster" book. The next morning Ed told me he read the whole thing while he was waiting up for his wife.

That day, we were invited to an Amish schoolhouse, located about two miles from the harness shop. On the way there, we passed John Lehman's blacksmith shop. John offered to shoe the horses for free, but they were all in good shape so I graciously declined. So we wouldn't go away empty handed, John tossed a bag of grain on the wagon.

Our trip to the Amish schoolhouse was a real treat. While the kids were still in class, I was invited inside to observe. Amish children attend school from first through eighth grade. In school, they learn the three

“R’s”, English, High German and other subjects.

The school was a single room that was divided into three classrooms with large semi-soundproof curtains. Either the kids were showing off for me, or they were really attentive and well behaved. The smaller children sat up front with the bigger ones in the back of the class. When the teacher said they were ‘excused’ to go outside and see the wagon, they didn’t waste any time.



Pulled up in front of the Amish schoolhouse

Many of the children had met me when I was a guest speaker at Horse Progress Days; that took place three months previously, in the large Amish community fifty miles to the south. Unlike ‘English’ children, they had little or no interest in the horses. The wagon and my travels were what intrigued them. As they were really well behaved, I had no problem letting them tour through the inside of the wagon.



Amish children don't have to wait until there 16 to drive to school. The older kids drive the younger ones. A row of carriages is parked outside the schoolhouse barn, which held the horses that drove the kids to school.

Denise and I had one more stop to make in this really great community; the Amish grocery store out on Route 67. I knew Richard, the owner from previous trips and he treated us like royalty. We were only allowed to pay for about half our purchases, which included some really good, homemade gravy mixes.

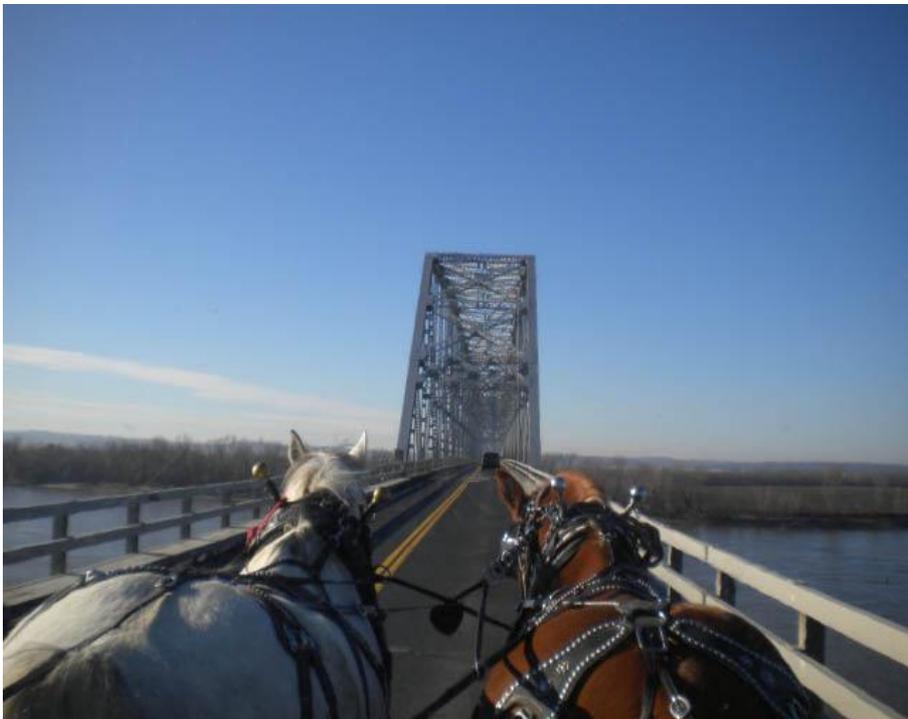
It was an honor to visit this fine community. In respect for their religious beliefs, I was careful not to photograph the Amish people.

Mighty Miss to Little Miss Prodigy

The sun showed bright on December 11, 2009. Denise and I were camped with some wonderful folks in Chester, Illinois and about to cross the mighty Mississippi River. The day would bring trial, conquest, hardship, and nearly despair; but, in the end we would find peace, harmony, and so much more.

A half hour after getting underway, we faced the mile-long crossing of the Mississippi River. Just before we started across the bridge, I turned to Denise and said, “I know Doc will be fine, I just hope the Belgians can keep it together.”

There was a hint of nervousness in her voice, when she replied, “You’ll do fine, and the horses will take their lead from you.”



Starting across the narrow bridge over the Mississippi. I had my steadiest horse, Doc on the left, nearest the traffic. Bill, my straw boss, was on the right.

Before we were a quarter way across, I knew she was right. Each lane was ten foot wide and had about a foot of usable shoulder space. The team did so well; they could have made the crossing if their lane was two foot narrower. Even when a semi-truck passed, going the other direction, they never wavered an inch,



Out front, I didn't trust Bob the horse to walk a straight line with oncoming traffic; but, walking behind the trailer he did great.

Fortunately, traffic was light so we didn't delay too many people. It took about 20 minutes to complete the crossing. I couldn't have been prouder of my team.

Reaching the flood plain on the west bank, I pulled into a gas station and let the backed up traffic by. While there, the Sheriff of Randolph County, Illinois stopped and visited for a while.

It was several miles across the flood plain. Prior to climbing the bluffs on the west side, Denise and I stopped for lunch. The horses each got an extra measure of oats while we took the time to hang Christmas decorations on the wagon and horses. I had AC power from the inverter, so we even plugged in the Christmas lights.



The lads, looking sporty, adorned with red Christmas garlands.

Denise and I were feeling jubilant after crossing the river, so we stretched lunch out a bit and enjoyed an extra cocktail. Always one to rub it in, she made light of the concerns I had about crossing the bridge, and said, “I told you it would be no problem.”

Unwilling to let her have the last word, I asked, “Then, why did you look like you were going to jump ship at any moment?”

Well, I had the last word, but I got punched in the shoulder for having it. Is there any justice in this world?

The extra measure of lunchtime oats came in handy as we started to climb the bluffs above the floodplain. Timed just right, the starchy oats turned to blood sugar and gave the team a little extra boost as we wound our way up some fairly steep hills.



Starting the climb up the hills on the west side of the Mississippi floodplain

The team was pretty tuckered by the time we made the top of the hills and entered the city of Perryville. After a good break, we pulled through some heavy city traffic. It was about a half hour before sundown when the wagon cleared the south end of town. The horses were tuckered and we started searching for a place to camp.

Occasionally, things don't work out as they should. At every house that looked like it might be a suitable place to camp, I knocked on the door, hoping to get permission to pull in for the night. In the next hour, I tried five or six houses, but couldn't find anyone home.

With it getting darker by the moment, a man pulled over and said we could camp at his place, just up the road. I punched his address in the GPS, and found out he was another seven miles ahead.

I was just about to give up, when I saw a house with a large yard alongside the road. Light was fading fast and we were about to become a real hazard on the highway. Finally, Bill Stortz answered my knock and graciously offered me a place on his lawn for the horses. The Stortz family saw a predicament and gave us the help we needed.

Not only were they some great people, they also had little girls; and I've got a secret weapon for dealing with little girls – I have Doc, my big gray Percheron; and there's nothing he likes better.



Doc would pass up a pan of yummy oats to bring a few smiles on some young girls' faces.

That evening, Denise and I were serenaded by eleven year old, musician, singer and songwriter Heather Stortz. Heather was a child prodigy who could bring blue grass music out of a fiddle like nobody ever could. That evening, after a private concert in the house, Denise got to attend a jam session with Heather and her musician friends (I had to stay back and watch the horses).



Blue Grass Jam Session

The next day, Doc had an opportunity to express his gratitude to Heather, her sister, and some friends. For several hours, he was happy as a lark, as an endless parade of young ladies got to ride him around the yard.



Heather's developmentally challenged sister and me up on Doc. Her balance wasn't too good, so I hopped up to help hold her in the saddle. Doc didn't mind a bit.



There's nothing like a good kiss after a workout!



A rub on the nose is pretty good too!

Our stay with the Stortz family will always be one my most treasured memories. Only the Lord could turn moments of despair into something so great.

As we bid farewell to this fine family, we thought it was for good; but, the very same night, they tracked us down at our next campsite. Heather had spent the day composing a song about our travels.

Accompanied by her friend Dan on the guitar, Heather played the mandolin and sang her song. Here are the lyrics:

The Journey, by Heather Stortz

Verse 1 -

There is a little man you should know about, he has three horses that are really stout. He's going on a journey, he's at a slow pace, he's not tryin' to win some race.

Verse 2 -

He goes everywhere and let's children ride his horse. If they want to ride again, he says, "Of course". His horses do not bite, his horses are not mean; they're just really tall and really lean.

Verse 3 -

He lives in this wagon that is horse-drawn, you better see him today, cause tomorrow he'll be gone. He has a book for sale, he has a book to sell, and in it you will find his story to tell.

Verse 4 -

He's crossed many bridges, narrow and wide, he went along the beaches and countryside. He has a life full of joy and glee, but a short while ago, he lived a tragedy.

Verse 5 -

There is a little man you should know about, he has three horses and dreams he talks about. He is a little man who will live his dream, and there he goes with his big, strong team.

Verse 6 -

There is a website that you can go to, if you'd like to follow, all you have to do is go to wagonteamster.com to see all the places he has gone.

In Dedication of Bob & his team, Bill, Bob & Doc.



Slick Rock Hill

By May 16, 2010, I was winding my way north through Western Colorado. While waiting for the snow to leave the high country, I had intended on traveling through the beautiful National Parks in Utah; but, was informed that the majority of them do not allow horses in the parks. As an alternative, I decided to journey through some of the rough country in Western Colorado.

The night of May 15, I was poised at the top of Slick Rock Hill, nervously anticipating a steep, six mile long descent to the Dolores River. To ensure I had time to check out the wagon brakes and rest my team, I made camp in a beautiful location that offered a panoramic view on three sides of the wagon of deep canyons and snow covered mountain ranges.



Finding the best camping place on the scenic top of Slick Rock Hill

After finding a flat spot that offered some grazing, I pulled the wagon over, unharnessed the team and set up my electric fence. It wasn't long before I had some visitors; the Howell Family showed up, bringing gifts of elk meat and beer. We decided to make a party of it and were soon relaxing around the campfire and having a good time. Doc took the time to entertain young Shiloh Howell while the adults assumed a more relaxed posture around the fire.



Doc believes that Nirvana is achieved when he can combine grazing on sweet, spring grass, and have a young lady sitting on his back.

As I was feeding some dried wood into the fire and sipping a beer, Rob Howell asked me, “How do you plan on safely making it down the hill? It’s a steady 7% grade for six miles, until you reach the bottom, 2000 feet below.”

Gesturing towards the wagon, I explained, “It may not look it, but since I’m loaded down with supplies, the combined weight of the wagon and trailer is now about 6,500 pounds, so I’ll have to use the wagon

brakes.”

With a concerned look on his face, he asked, “What happens if you lose the brakes; can the team hold back the weight until you pull over?”

“No, if the brakes let go, I would be in a real pickle. In about three seconds the horses would already be in a dead run, with the wagon pushing them down the hill. No, the only thing I could do would be to turn the team hard into the hill and crash it before we gathered too much speed.”

Taking another sip of beer, I went on to explain, “The best thing to do is to prevent the brakes from overheating. The wheel cylinders are made of cast iron, so if they overheat, the brake fluid pressure will rise and they’ll blow out. To keep that from happening, I have to make a lot of stops to cool the brakes down.”

Crumpling up his beer can and tossing it in to a slowly growing pile of empties, he sighed, and said, “Better you than me, Buddy.”

The next morning, I was up at the crack of dawn, eager to break camp and start my downward trek into the river valley. There was a final obstacle to overcome before starting downhill; stretched across the highway was a cattle guard to prevent free-ranging cows from entering the road below the crest of the hill. Since the horses wouldn’t dream of trying to step across the horizontal pieces of pipe and possibly breaking a leg, I opted to travel through the go-around wire gate, located in the fence to the right. It was obvious that the go-around gate hadn’t been used in some time, as it was overgrown with weeds and had some hillocks of dirt that I had to smooth out with a shovel.



Cattle guards are a common sight in Colorado, which is a 'free-range' state. If an animal with hooves tried to step across it, they would break a leg in the gaps between the horizontally laid pipes. Horses and cows instinctively know that, and never attempt it. Cattle guards allow cars to pass, but act as a barrier to grazing animals.

With the cattle guard behind me, it was only a couple of hundred yards until the roadbed declined steeply, and we started down the hill. Since I was riding the brakes, it didn't take long before they started heating up. Every few minutes, I stopped to check the brake temperature. When the wheel hubs were hot enough, such that I couldn't put my hand on them for more than a second or two, I pulled over to let them cool.



Starting downhill – the Runaway ‘Horse’ Ramp sign didn’t provide a lot of comfort.

The road was narrow, but offered small turnouts every few hundred yards that were just large enough for the team and wagon. I used these opportunities to relax, drink a cup of coffee and cook some breakfast.

It was a slow trip down to the valley below. I stopped to cool the brakes a total of six times; each lasting about fifteen minutes.



On the side of the road, waiting for the brakes to cool. To make the wagon more visible to traffic, approaching from the rear; I turned on my red and blue flashing lights.

With a sigh of relief, I rolled off the bottom of the hill and reached the Dolores river valley. A mile down the road, I pulled over in a turnout by the river to fill up my water jugs. After leaving the river behind, I didn't expect to find a source of water for the next couple of days. It was a desolate country, and the few ranches in the area were situated several miles off the highway.



Pulled over to refill water jugs from the Dolores River

For a couple of hours, the road ran alongside the Dolores River, until turning up a side canyon and entering Disappointment Valley. Traffic was very light, with only one or two vehicles going by each hour. Just before dropping down into the valley, I stopped to chat with a guy riding a motorcycle, but that was the only visitor we had in this lonely place.



Disappointment Valley - even in a relatively wet spring, it was dry and desolate. I knew how it got its name.

By late afternoon, the team was getting tired, but before making camp, I first wanted to climb out of the valley and to the top of Big Gypsum Gap. With an hour of sunlight remaining, the roadside opened up and there was enough room to put up a pen for the night.



Camped in Big Gypsum Gap – a wild and lonely place

After unharnessing the horses, I turned them into the electric fence so they could roll and graze. As I was sitting outside in a chair, I suddenly saw the horses' heads go up as they stared at something to the south. Following the direction of their eyes, I watched as a small herd of mule deer ran by, about 100 yards away.

My thoughts turned to the reason the deer were running, 'There shouldn't be anything to startle them like that. I'm downwind and not moving; and the horses wouldn't be a threat.' The only things I could think that would make them move like that were a man or some other type of predator. I was alone in this desolate land, and it wasn't bear country; so the only possibility was a mountain lion.

After watching the deer move off, I went into the wagon for my revolver. Back outside, I pulled Bob, the horse out of the pen and tied him to the side of the wagon.

Right then, I was afraid of having the team escape from the pen, with no way to catch them. With Bob tied up, I would have another horse to saddle up and chase the others with. We were camped in the midst of thousands of square miles of wilderness.

Shortly after the sun went down, I retreated to the wagon and went to bed. Falling asleep, I kept my revolver close at hand; ready for whatever might have frightened the deer.

Sometime in the middle of the night, I snapped awake at an alarmed call from Bill, my big red Belgian. In the horse talk that I was all too familiar with, he was saying “There’s a predator!”

Snapping on my headlamp, I grabbed my revolver in my left hand, a hunting knife in my right, and clad only in my long underwear; exploded out of the wagon. Billy and Doc had assumed a very alert posture, staring at something beyond their electric fence. As the horses started backing up, I was afraid they were going to back through the fence and run off in the darkness.

Leaping the fence, I ran out in front of the team, sweeping my head back and forth, searching the darkness with the headlamp for danger. Near the limit of the light’s beam, I caught sight of a tawny brown shape, running away. Thumbing back the hammer of the gun; just in time, I stopped myself from shooting, realizing that a shot now would scatter my team into the darkness.

It was an hour later before I had all three horses tied to the side of the wagon. Finally, I fell in to a light sleep, ready at a moment’s notice to jump back in to action.

The next morning, I awoke to a peaceful scene of the horses, tied to the wagon and calmly munching their hay. Walking to the far side of the electric fence, I cast about for sign of what had caused the ruckus in the middle of the night. About thirty feet the other side of the fence I found a single paw print, where the large cat had dug in one of his front feet while turning to run away.

Shaking my head, I muttered to myself, “I think I’m starting to like Colorado.”

High Altitude Horses

On the evening of June 15, 2010, I was camped at the Matterhorn Campground, in Uncompagne National Forest, Colorado. Most of the day had been spent winding my way through the Illum Valley. The Telluride, Colorado Blues Festival was about to get underway, and traffic was picking up on the highway. After climbing the headwall out of the canyon, and making their way to our present location, the horses were wiped out. With a heavy wagon and steep roads, they had spent the last few miles hooked up in a Unicorn hitch; all the while putting in a superb performance.



After a long day in harness, my magnificent team was ready to call it a night!

The campground attendants, Mike and his wife, were happy to see me and offer a place to camp. Originally from Indiana, they were excited to hear that I began this journey in their home state. Since I wasn't occupying a normal camping spot, they were happy to waive the normal camping fee.

It was a pleasant evening with a lot of people walking up to the campsite to see the horses and chat. An often heard question on the wagon is, "Are those Clydesdales?"

To which I reply, "No, they're bigger than most Clydesdales. The red horses are Belgians, which is the heaviest breed of horses, and the gray is a Percheron, which is the second heaviest."

"Bigger than Clydesdales; imagine that?"

I guess Budweiser has done a pretty good job with their advertising campaign?

The next morning, I had to drive through the campground to refill some water jugs. On the way through, I stopped several times to let children visit with the horses. I was going to hitch back up in the Unicorn, but not until I got out near the road. In the meantime, Doc was walking behind the trailer and offered a seat for a couple of young girls.



I bet these little girls had something to talk about later that day!

From the Matterhorn Campground, the road south to Lizard Head Pass was fairly steep. I began the day driving down the highway in the Unicorn hitch. With the Bluegrass Festival in nearby Telluride about to get underway, there was a lot of traffic. With everybody stopping to gawk and take pictures, I wasn't helping the situation much.

As we wound our way up the highway, climbing towards Lizard Head Pass Summit, the scenery was astounding. With rugged rock faces, snow capped mountains, deep green forest and beautiful Trout Lake; this is easily one of the most gorgeous drives in the world.



Trout Lake, Colorado

After climbing the steepest hills, I stopped a mile short of the summit for lunch. With great weather, gorgeous surroundings and unbelievable scenery, I thumbed my nose at corporate America and stretched my lunch break out to an hour and a half.

While I was pulled over for lunch, I had several visitors, including a recently retired equine Veterinarian and his wife. He did a cursory check on the horses and couldn't believe how healthy and physically conditioned they were. When he asked me my secret, I replied, "Take care of their feet, good feed, plenty of work and some time off."



Stopping for lunch, just north of Lizard Head Pass, Colorado

When we pulled out for the pass, the steepest hills were behind us, so I let Doc walk behind the trailer. It's a good thing too; he's a very proud horse out front and likes to pull most of the wagon by himself.

Reaching the summit, I stopped to let the horses catch their breath while I took a few pictures. At 10,222 feet, this was a new altitude record for the wagon. The team wasn't at all out of breath, so I guess they were pretty acclimated to the altitude.

At the top of the pass, a great green meadow is spread over hundreds of acres. The headwaters of the Dolores River begin here, quickly becoming a large stream in just a few miles. Rugged, granite, mountains; cast in shades of gray and red, tower over this serene setting. I've seen a lot of beautiful places, but this was one of my favorites.

Right then, I decided that this was going to be a short day of travel. I was going to take my wagon, drive it out in the midst of this splendor;

and camp in a way that was reminiscent of the old time sheepherders.

After searching around an old corral near the top of the pass, I turned back to the highway and drove south for another mile. Spotting a shallow grade leading away from the road, I made a hard left turn and started driving across the meadow. Near the banks of the river I stopped my team and made camp.



If god ever made a more perfect place to camp with a team of horses, I couldn't imagine it. This was truly befitting a team of High Altitude Horses – Lizard Head Pass, Co. Photo courtesy of the Seiser Family.

As I sat on the banks of the Dolores River, fishing pole in one hand, beer in the other; I thought back on the thousands of miles I had traveled in the preceding two years. I remembered the wonderful people, places and sights; the joy, anguish and glee. But most of all, I reflected on all the happiness the wagon had brought to a fast-paced world. When

I cast my eyes across the meadow to the sweeping peaks that towered above; I really knew why I had hitched up this great team and set off on the grand adventure.



Photo courtesy of the Seiser Family.

Afterwards

I finished writing this book near the end of December, 2011. In just a few weeks I am going to start making preparations for Trip #4. At the end of April, 2012, I plan on making a year-long, 5,000 to 6000 mile tour of the American Rockies by horse and wagon.

The journey will start in Southern Colorado, before driving north, through Wyoming and Montana. Then I'll turn west and cross the Continental Divide, before driving south, down the western slope of the Rockies. By the following winter, I plan on reaching the southern deserts; where I'll make my way east, back across the Divide, then turning north to Colorado.

You can track my adventures by going to www.wagonteamster.com