RACING, REGION, AND THE ENVIRONMENT: A HISTORY OF AMERICAN MOTORSPORTS

By

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To Michael and Tessa

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This dissertation is a comprehensive environmental study of motorsports and defines, discusses, and analyzes the reciprocal relationship between auto racing on one hand and the cultural, regional, ecological, and geographic environments on the other. It explains how environmental issues and geographic dimensions served as catalysts for continuities and discontinuities in the course of local, regional, and national motorsports development by exploring how track owners, promoters, drivers, and motorsports entities organized themselves around the environment.

This study provides a better understanding of regional motorsports development by studying the relationship between auto racing and topography. It investigates how environmental issues and questions over public and private space affected motorsports and devotes specific attention to explaining how suburbanization impinged on motorsports and influenced speedway construction and demolition. This dissertation also outlines the degree in which environmental and ecological concerns have affected auto racing in selected areas of the country. Finally, this study shows how some auto racing entities have embraced or have been forced to assume specific responsibility for the environment by mandating alternative fuels and setting eco-friendly regulations.

CHAPTER 1
INTRODUCTION

The environment has always influenced the course of automobile racing, and this comprehensive study provides both an understanding of the history American motorsports, while placing auto racing in the greater contexts of sport history and environmental history. Nature provided the first track surfaces and determined the aesthetic of racing. Geography and demography dictated the location, construction, and destruction of racetracks. Speedways were created environments and most American auto racing facilities occupied private space, while others existed on state or county property. Oval tracks, where cars raced in a counter-clockwise direction on either dirt or asphalt, were most common in the United States. Ovals one mile or longer in circumference became known as superspeedways. In addition, permanent road courses and temporary street circuits consisted of twists, turns, and elevation changes and the vehicles raced in either direction (usually on pavement). Drag strips were one-quarter or one-eighth-mile paved straightaways.

Over time, humans conquered both natural and constructed environments with speed, and racecars eventually had to be slowed down because vehicles became too fast for the tracks, and safety became a concern. The environment fostered and impeded speed and played a critical role in the aesthetic of speed. Wind, sunlight, cloud cover, and humidity all affect the performance of a racecar. To maximize performance, engineers must find the correct balance between the car and the environment, and drivers have to master track conditions, which change with the changing elements. The most successful competitors were most in-tune with the environment. Many memorable races occurred when unexpected climatic conditions affected the racetrack and the racecars—countless upset winners prevailed in rain-shortened races. Factories, teams, and

drivers spend millions of dollars every year to overcome environmental obstacles presented by the racetrack and its surroundings.

Since the earliest races, countless sanctioning bodies organized motorsports. Small, locally based sanctioning bodies were sometimes referred to as clubs. These entities brought organization and stability to the sport, and their functions changed little since the sport began. A sanctioning body's main purposes usually included finding venues at which to compete, negotiating contracts with tracks, officiating races, and raising and distributing purse money. In some cases, they provided travel expenses for drivers and teams. Sanctioning bodies often required a sanctioning fee charged to the venue, which varied from track to track, and played a major role in promotion and public relations.

Much like the environment, sanctioning bodies influenced and changed the sport throughout auto racing history. Although envisioned to foster stability, various sanctioning bodies clashed with drivers, racecar owners, and automobile companies in the earliest days of auto racing, and this remains the case today. Some sanctioning bodies were involved with only one type of racing while others incorporated different series or divisions. A few entities and types of racing rose from regional to national influence. Sanctioning bodies dictated the geographical, environmental, and ecological development of American motorsports, and a detailed account of auto racing must address the history and influence of these entities. Shifts in the organization of different types of racing tend to move quicker than other sports, due to constant splitting, forming, and fighting between sanctioning bodies.

As there were a myriad of sanctioning bodies, numerous varieties of auto racing existed in America. The major distinction is that between open-wheel cars, stock cars, and dragsters. Top American divisions of open-wheel cars were commonly known as championship cars or Indy

cars. These true racecars—low-to-the ground, open-cockpit, machines—shared very few characteristics with the contemporary highway automobile. Open wheelers race on oval tracks as well as road courses. Notably, Formula One, the Indy Racing League (IRL), the United States Auto Club (USAC), and the World of Outlaws races were all contested with open-wheel cars.[1]

The international sanctioning body for auto racing, the Federation Internationale de l'automobile (FIA), formed in 1950. That year the term Formula One came into use. Formula One was by far the most expensive and technologically advanced racing series on the planet. Historically, two-car teams competed in Formula One, and each team had an engine program from a notable worldwide producer, such as Mercedes, Toyota, or Renault. Some teams received chassis support from these companies while others designed their own chassis. Contests between these fenderless, fragile, super-sleek racecars, known as Grand Prix events, were staged throughout Europe and Asia, as well as in Brazil and Australia and held exclusively on road courses or street circuits.[2]

Although the racing was bland with little on-track passing, Formula One (behind soccer) remained the second-most popular sport in much of Europe and South America. Formula One drivers were heroes and legends in their home countries, even more so than sport heroes such as Michael Jordan and Babe Ruth were in America. Formula One, by contrast, has enjoyed limited success in the United States, and only two world champions, Phil Hill (1961) and Mario Andretti (1978), hail from this country. This study's discussion of Formula One racing is limited to

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[1] In this study, motorsports pertains strictly to automobiles. There is an even larger gap in scholarly literature regarding motorcycle, boat, or air racing.

[2] A useful recent resource on the general history of Formula One racing is Giuseppe Guzzardi and Enzo Rizzo, *The Century of Motor Racing: The Drivers and Their Machines* Translated by Neil Davenport. (New York: Barnes and Noble, 1998). See also Chuck Dressing, "F1 at 50," *Racer*, January 2000, 34; Maurice Hamilton, "Globe Theater," *Racer*, September 2000, 30-43.

mentioning some of the events that occurred on American soil, and more specifically, at both rural and urban venues.[3]

A more popular form of open-wheel racing in America, championship racing, dates back to the earliest days of automotive competition. It must be pointed out that open-wheel and stock cars were initially one in the same before cars were designed with hoods and windshields (the first open-wheeled racecars were two-seaters occupied by both a driver and a mechanic). Once inventors and mechanics developed components that increased speed and performance not necessarily adaptable for commercial automobile production, stock racecars evolved into championship cars. In the early days of racing, proponents differed whether the purposes of racecars should be strictly for sport or to promote the commercial industry and showcase automotive innovation. The American Automobile Association (AAA) began sanctioning races in 1902 and awarded its first formal championship in 1910. Championship cars raced on all types of tracks and surfaces and were the cars that competed at the Indianapolis 500, first held in 1911.[4]

American championship racing was similar to Formula One, and the cars were less expensive and technical with slightly lower performance. AAA-sanctioned championship racing was the premier form of auto racing in the United States through 1955. At the end of that year the AAA withdrew from motorsports, and the new United States Auto Club (USAC) assumed control over championship racing. Although sanctioning bodies, in theory, were intended to foster stability, over the course of racing history, disagreement and disgruntlement frequently led to a new organization being formed out of an existing sanctioning body. In a most far-reaching

[3] Maurice Hamilton, "Golden Geese," *Racer,* March 2001, 34-40; Adam Cooper, "Silent Expectations," *Racer,* February 2002, 38-45; Chuck Dressing, "Never Before or Since," *Racer,* June 2001, 78-81.

[4] "Constitution and By-Laws of the AAA," *The Automobile,* 11 May 1902, 145; "New Road and Track Racing Rules of the American Automobile Association," *The Automobile,* 6 May 1905, 559-561.

example with long-term repercussions, a group of championship car teams left USAC and created Championship Auto Racing Teams (CART) in 1979. The USAC Championship division faded over the next couple of years, and CART replaced USAC as the top championship car racing series in America. But the formation of the Indy Racing League (IRL) in 1994 slowed CART's growth. CART (which became the Champ Car World Series Powered by Ford beginning in 2004) and the IRL both contested open-wheel races in North America from 1996 through 2007. In 2008, the two entities merged under the IRL banner.[5]

This study explains in part how regional and environmental factors shaped the rise and demise of this form of American motorsport, best known as the type of cars that compete at the Indianapolis 500 every Memorial Day weekend. To alleviate confusion, this study will only identify the variety of championship cars that competed under the sanction of the Indy Racing League as "Indy cars." The Indy cars shared some characteristics with Formula One cars, though less technical and expensive, and IRL teams did not build their chassis in-house but purchased them. Currently, Marco Andretti and Danica Patrick are two of the biggest stars in the IRL. In April of 2008, Patrick became the first woman to win a major American auto racing event.[6]

As the commercial automobile industry and racecar industry continued to mature, sometime in the 1910s, sprint cars emerged on the scene. They were less powerful and less expensive versions of a championship car. From the 1930s through the early 1960s, they were better known as "big cars." Sprint cars race on dirt or asphalt, and these front-engine speedsters

[5] Beginning in 1971, championship races were no longer held on dirt. USAC sanctioned championship races from 1979-1981. It then withdrew from championship cars with one notable exception. USAC continued to sanction the Indianapolis 500 through 1997. The IRL's first race took place on January 27, 1996.

[6] The Indianapolis 500 was not held during the war years of 1917-1918 and 1942-1945. A comprehensive history of American championship racing is a topic awaiting full-length treatment.

were some of the most popular racing cars at America's smaller local tracks and most commonly found on dirt track facilities of a half-mile or less. The sprint cars usually raced in a series of qualifying heats, with the "feature" as the last race of the day, usually ten- to thirty-laps-long, when the final winner is determined. Sprint cars were once the major path to Indianapolis, but as of late, most sprint car drivers were short-track specialists that remained at the top-levels of sprint car racing. The International Motor Contest Association (IMCA) was one of the most popular sprint car sanctioning bodies from 1915 to 1977. Present sprint car racing sanctioning bodies include the World of Outlaws, United Racing Club (URC), and All-Star Circuit of Champions.[7]

Sprinters evolved from championship cars; midget racers sprang from sprint cars. Midget racing has existed for over 75 years. Contemporary midget racers are front-engine, purpose-built racecars similar to sprint cars although less powerful and smaller. Midget racing, once an inexpensive means of getting started in the sport, has become more costly. Midget racing was sanctioned by countless predominately regional entities, and today, USAC is perhaps the most prestigious. Other major entities include the American Race Drivers Club (ARDC) and Badger Midget Auto Racing Association (BMARA).[8]

Another major type of vehicle utilized for racing purposes in America, and perhaps the best known, is the stock car. The name stock car derived from the fact that originally the cars on the track were identical to cars produced by automakers for the mass consumption market. Before racers began transforming their vehicles into specialized racecars, the very first American and European racecars were in fact stock cars. The National Association for Stock Car Auto

[7] Throughout racing history, the term "outlaws" was mostly identified with sprint car drivers.

[8] Jack C. Fox, *The Mighty Midgets: The Illustrated History of Midget Racing* (Speedway, Ind: Carl Hungess, 1977).

Racing (NASCAR) was born in December 1947, and the "strictly stock" or "Grand National" division was inaugurated in 1949.[9]

Initially, Grand National cars replicated vehicles—from body styles to engine design—available for purchase at a local dealership. In NASCAR's early days, NASCAR head, Bill France Sr., had rules prohibiting modification and enhancement that changed cars minimally. Many drivers attempted to cheat the rules, and suspensions and fines were commonplace. Throughout the 1950s, NASCAR grew into less of a "strictly stock" car organization. Rules were slowly altered to allow modifications to the cars, which gradually improved and demonstrated enhanced speed and performance, and commercial automakers and other automotive companies began to develop specialized equipment solely for racing, while maintaining selective stock characteristics such as body styles.[10]

Numerous organizations over the decades sanctioned stock car racing. The AAA, USAC, and IMCA once had stock divisions. Founded in 1953, the Automobile Racing Club of America (ARCA) is one such contemporary entity, but NASCAR became, without a doubt, the most popular, successful, and lucrative racing organization in the United States. The Sprint Cup Series was NASCAR's top level, but smaller divisions competed under the NASCAR banner, in which the most popular were the Nationwide Grand National Series and the Camping World Truck Series. Ranking only behind football, Sprint Cup racing was America's most heavily attended spectator sport, featuring such stars as Dale Earnhardt Jr., Jeff Gordon, and Tony Stewart. Some tracks average well over 200,000 spectators at their respective events. Over the last couple of years, American attendance and television ratings leveled off, as the Sprint Cup

[9] From 1972 through 2003, the series was known as the Winston Cup.

[10] Other forms of stock car racing (but not limited to) include jalopies, modified, sportsman, street stocks, and bombers.

series gained a larger following outside of America, attracting drivers from such countries as Colombia, Canada, and Australia. In 2008, four worldwide automakers (Ford, Chrysler, General Motors, and Toyota) provided engines and technological support to NASCAR teams.[11]

Road racing, sometimes referred to as sports car racing, was similar to Formula One racing in that it is a form of motorsport that competes exclusively on road courses and street circuits. However, the emphasis in sports car racing was time; drivers raced the track, with little side-by-side racing action. This was especially true at the lower levels of sports car racing. Sports cars fell into two main categories. Some were purpose-built racecars that hardly resembled their street counterparts, instead looking more like open-wheel-style racecars. At the same time, some classes of sports car racing were similar, if not identical, to foreign and American stock vehicles. Road races often featured different classes and makes of cars sharing the same racetrack while contesting separate races. Like championship racing, American sports car racing has been plagued by battles between and within sanctioning bodies. In 2008, the Sports Car Club of America (SCCA), Grand American Road Racing Association, and the American Le Mans Series (ALMS) were the largest sports car racing organizations in the United States.[12]

Drag racing is another significantly different kind of auto sport. Straight tracks, typically a quarter- or eighth-mile long accommodate these head-to-head events. Many divisions and varieties of drag racing comprise this uniquely American racing form. The very bottom level featured local mechanics transforming their streetcars into so-called hot rods. The pinnacle was the National Hot Rod Association (NHRA), which began in 1951. This organization's most popular types of racers are: Funny Cars, Top Fuel, and the Pro Stock Cars and Motorcycles. As

[11] The Camping World Truck Series was known as the Craftsman Truck Series from its inception in 1995 through 2008. The Nationwide Series was known as the Busch Grand National Series from 1984-2003 (simply known as the Busch Series from 2004-2007). Kimberly McGraw, "Growth Spurt," *Speedway Illustrated*, February 2007, 122-124.

[12] Bill Oursler, "Buying Power, *Racer*, January 1997, 40-41; John B. Heimann, "The Last Great American Road Racing Series, Part 1," *Vintage Motorsport*, Nov/Dec, 1993, 48-62.

of late, drag racing has enjoyed significant growth. Recent years have seen increases in attendance, media coverage, and television ratings. Hosting events in nearly every major American market, the NHRA is truly a national series and has also transcended race and gender more than other types of motorsports. For instance, Shirley Muldowney won three Top Fuel championships in 1977, 1980, and 1982, and African American driver Antron Brown won two Top Fuel events in 2008.[13]

Modifieds were purpose-built racecars best described as an open-wheel, hot-rod hybrid. They share characteristics of both open-wheel cars and stock cars and competed on both dirt and asphalt. "Modified stocks," however, are souped-up stock cars that still somewhat resemble a commercial automobile. Today's Sprint Cup cars may look like showroom body styles but nearly all of the components are modified with expensive parts made out of costly alloys and materials. Definitions and specifications of modifieds vary not only from region to region, but from track to track.

Also somewhat falling into the middle is supermodified racing. Most famous in New York, this form of racing also became popular in other pockets of the country, namely Texas and California, but the "supermods" are still most associated with Oswego Speedway in New York and a few other tracks in New England. These contraptions, possibly the ultimate racing hybrids, also differ by differences in regional definition and rules.[14]

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[13] The International Hot Rod Association (IHRA) serves as a second major American hot rod racing entity. For details on drag racing's history and technology and in-depth descriptions of the different types of hot rods see the fine studies, Robert C. Post, *High Performance: The Culture and Technology of Drag Racing, 1950-2000* (Baltimore: Johns Hopkins, 1994), and H. F. Moorhouse, *Driving Ambitions: A Social Analysis of the American Hot Rod Enthusiasm* (New York: Manchester University Press, 1991). John Asher, "Maximum Impact," *Racer*, May 2001, 98-101; John Asher, "It's All Good for the NHRA," *Racer*, May 2002, 112-116; John Asher, "Return Engagement," *Racer*, November 2000, 56-60; John Asher, "The Last Pass," *Racer*, March 2004, 74-78.

[14] "New England Supermod Club Looking for Big Year," *Illustrated Speedway News*, 26 January 1971, 10; Shirley Letcher, "ISMA International Super Modified Association," *Open Wheel*, February 1982, 38-39, 89.

Dirt late-model stock cars are greatly modified racecars set up to run exclusively on natural surfaces. In the 1970s, the first national traveling entity, the National Dirt Racing Association (NDRA) formed, and this type of racing grew at both the regional and national level. Despite their misleading moniker, these were true racecars with very few stock characteristics. This study sporadically addresses drag racers, modifieds, supermodifieds, and dirt late models, and these subsets of racing await future full-length academic studies. These types of racecars, however, have competed at many of the tracks mentioned in the text.[15]

The history of motorsports development certainly must take into account the drivers and the cars, but this study focuses on racetracks and regions and a study of places and environment, rather than a study of people. Motorsports has exhibited varying degrees of "staying power" in different regions of the country providing the opportunity to apply community studies to the bigger picture of American motorsports. This dissertation traces the history of varieties of motorsports and investigates how motorsports development varied in the Northeast, Midwest, Southeast, and West.

For the purposes of this study, the Northeast consists of all of New England and most of the Mid-Atlantic states of New York, New Jersey, Delaware, and easternmost Pennsylvania and Maryland (incorporating both the Baltimore and Washington, D.C. markets). With the exception of Philadelphia and the extreme eastern quarter of the state, most of Pennsylvania's racing history resembled the Midwest. Western Maryland remained rural and also resembled the

[15] Steven Cole Smith, "Live Fast, Race Hard, Sell a lot of T-Shirts," *Car & Driver*, March 1999, 132-139; Jerry F. Boone, "Dirt Done Right," *Stock Car Racing*, January 2006, 32-34; Norm Froscher, "Getting Started on Dirt, "*Stock Car Racing*, September 2008, 14-17.

Midwest in terms of racing development. The Southeast includes Virginia, the Carolinas, Georgia, Alabama, Tennessee, and Florida.[16]

The Midwest had "racing sub-regions." The most notable was the eastern Heartland, which consists primarily of central Pennsylvania west to Ohio, Indiana, and Illinois. In addition, four "cotton" states, Texas, Mississippi, Louisiana, and Arkansas shared more in common with the Midwest than the Southeast. The Rocky Mountains and Plains states also fall in the Midwestern category.

As for Alaska and Hawaii, these states easily fall into the Midwest region. The Alaskan wilderness and the island paradise were both dirt-track country. The same could be said about the western states of Oregon and Washington. For the purposes of this study, Arizona, Utah, and Nevada are grouped in with California. These western states share similarities in climate and topography, and their racing developments, although not parallel, share many of the same characteristics.[17]

Case studies reflected general regional trends, and this study integrated a cross-section of American racing geography. States such as California, Florida, Illinois, Iowa, Pennsylvania, North Dakota, New York, and New Jersey have been devoted more generous attention. Of course, case studies and regional organization offers limitations, and as this study points out, boundaries are fluid in racing geography. Not unlike politics, different parts of states have distinct racing preferences and these preferences periodically shift. States such as Florida are especially challenging. Environmentally it was Southeastern, but Florida's racing history in

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[16] Maryland is home to one of the top American dirt tracks in the country located in Hagerstown just south of the Pennsylvania border. Venlo Wolfsohn, "Auto Racing in Area Has Banner Season," *Washington Post*, 16 October 1968.

[17] John Sawyer, "Yukon Tim Gee," *Open Wheel*, January 1984, 38-39, 75; J.R. Williams, "Sprinters in Paradise," *Open Wheel*, January 1984, 42-43, 75-76.

many ways also reflected Northeastern and Midwestern trends. And like the western states, the Florida beach has been conducive to record-setting land speeds as was the case with the hard-packed California and Utah deserts.

Until recently, scholars paid little attention to American auto racing. Although books on baseball, boxing, and horse racing are numerous, academic treatments of motorsports are rare. Most of the auto racing texts found in today's bookstores are fan-inspired accounts, pictorial works, or ghost-written biographies. The popularity of NASCAR provides the major impetus for academic interpretations of auto racing in this country. As a result, the bulk of motorsports scholarship focuses on NASCAR and its socio-cultural connection to the American Southeast.[18]

NASCAR was, unquestionably, a fraction of America's motorsports tradition, but even grassroots and alternate forms of non-NASCAR stock car racing have been neglected in academia. Although millions of spectators have attended countless varieties of auto races and thousands have participated, most forms of racing remain ignored by the academic community. The histories of open-wheel (championship, sprint, and midget) racing remain virtually untouched by scholars. In addition to NASCAR, this study focuses on four of the largest and longest-lasting open-wheel racing groups: USAC, IMCA, CART, and the IRL. These entities have separate and distinct histories and uniquely shaped the geography of American motorsports.

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[18] For instance, Mark D. Howell, *From Moonshine to Madison Avenue: A Cultural History of the NASCAR Winston Cup Series* (Bowling Green, OH: Bowling Green University Press, 1997). Richard Pillsbury, "Carolina Thunder: A Geography of Southern Stock Car Racing," in *Fast Food, Stock Cars, and Rock 'n' Roll: Place and Space in American Pop Culture*, ed. George O. Carney (Lanham, MD: Rowman and Littlefield, 1995), 229-238; Richard Pillsbury, "A Mythology at the Brink: Stock Car Racing in the American South." in *Fast Food, Stock Cars, and Rock 'n' Roll: Place and Space in American Pop Culture*, ed. George O. Carney, 239-248; Jim Wright, *Fixin to Git! A Fan's Love Affair with Winston Cup* (Durham, NC: Duke University Press, 2002); Neal Thompson, *Driving with the Devil: Southern Moonshine, Detroit Wheels, and the Birth of NASCAR* (New York: Crown Publishers, 2006); Pete Daniel, *Lost Revolutions: The South in the 1950s* (Chapel Hill: University of North Carolina Press, 2000), 91-120. For a solid study on the intersection between the national growth of NASCAR and technology, see Ben A. Shackleford, "Going National while Staying Southern: Stock Car Racing in America, 1949-1979" (Ph.D. Diss., Georgia Institute of Technology, 2005).

This dissertation will be the first scholarly study to thoroughly address the histories of open-wheel racing.

Road racing is another form of American motorsport lacking significant academic analysis. This study would be incomplete without touching on the distinct regional development of this "European" type of motorsport, which retains a vibrant subculture in this country. Some attention is devoted to sanctioning bodies such as the Sports Car Association of America (SCCA), American Le Mans Series (ALMS), and International Motorsports Association (IMSA). Sports car and, to an even much lesser extent, drag racing will fall moderately within the scope of this examination as they connect to American racing development and racetrack construction.

This study complements scholarly contributions regarding NASCAR's history and development but adds to existing stock-car racing academic literature by discussing factors outside of NASCAR that contributed to its rise, and by doing so, this work contextualizes NASCAR as part of the larger American racing story. Central to this dissertation is a thorough explanation of why forms of racing other than NASCAR subsist, survive, thrive, and die and how environmental, regional, and ecological forces accounted for their developments.

The study is organized chronologically, and each chapter examines different forms of auto racing through various environmental and geographical lenses. Without question, technology also intertwined with the environment in the history of American motorsports, and this study attends to this connection. The earlier chapters tend to address regionalism and geography. The latter chapters deal more extensively with sprawl, environmentalism, and ecology. The environment was a principal determinate in the course of motorsports history, and as an American environmental consciousness intensified, an institutional self-consciousness of connections to the environment emerged within motorsports.

The green flag waves with (Places, Spaces, and Races: the Beginning, 1895-1918), which explores the early development of motorsports in the United States from the turn of the century to World War I. Just as the first domestic animals competed with draft animals on the country's limited roadways, the first automobile racers encountered similar resistance when they first rolled onto horse-racing tracks, seemingly logical if not altogether ideal venues for testing the speed of horseless carriages and the skills of drivers. Space acceptable to racers and to the public (not to mention animals) presented the sport—whether staged on sand, dirt, or board tracks—with one of its first challenges. Geographic, demographic, social, and economic factors combined to shape the rise of American motorsports, the types of racing that defined the new sport, and the sanctioning bodies that gave it an organized and official cast. Gradually spreading out from urban population centers to rural venues, auto racing began to show an enduring presence by the 1910s.

Chapter three (Minor leagues, Fuel, and the Great Depression, 1919-1944) begins with a look at board track construction in the 1920s. As wooden superspeedways in major markets hosted championship races, local dirt tracks accommodated the development of grassroots racing. Motorsports reflected the American public's enlarged search for recreational outlets and minor-league entities sprouted up to accommodate the growing sport. The development of more powerful automobile engines, racing or otherwise, required better fuel. After scientists discovered that the addition of tetraethyl lead to gasoline improved engine performance and fuel economy in 1921, this toxic substance quickly found its way into the fuel tanks of racecars. Leaded gasoline became standard in commercial American automobiles for over half a century, although safer, alcohol-based additives such as ethanol could have substituted for lead's higher octane properties. But ethanol was all but forgotten by the time of the Great Depression.

Motorsports was not. The depression spawned midget racing and a growing interest in stock car racing. To be sure, the 1930s offers clues explaining the future success of NASCAR. By the early 1940s, sports car and drag racing emerged in the Northeast and California, respectively.

The fourth chapter (If You Build It, They Will Race: 1945-1955) explains how auto racing's growth can be traced in part to military veteran participation and the proliferation of hundreds of new motorsports facilities. Although some of these new speedways featured pavement, the majority of national and grassroots races remained on natural surfaces. Road racing and drag racing found suitable venues at abandoned military airstrips, but the popularity of these forms of racing led to the emergence of permanent road courses and drag strips during this period. Midget racing—most popular in the late 1940s—quickly faded. Meanwhile, stock car racing exploded, and the establishment of NASCAR brought organization to the growing sport. Although most Grand National races took place in Dixie, the schedule featured numerous events in other parts of America throughout the 1950s. This chapter explores how the development of stock car racing in the Northeast, Midwest, and West was similar and different from that in the Southeast.

Chapter five (Superhighways, Sprawl, and Superspeedways, 1956-1969) illustrates how urban sprawl spelled doom for many tracks, which suburbia ultimately forced to close. New interstate highways webbed across America, which had major effects, both positive and negative, on racing venues. This period saw the unveiling of European-style road courses carved throughout the American countryside. The Grand National series reduced its northern schedule, becoming entrenched in the Southeast during this time. Asphalt superspeedways sprouted up throughout the region, which accommodated ten thousands of fans, while fostering wicked

racecar speeds. In many locales, asphalt replaced dirt surfaces. The decade also marked the last golden era of IMCA-sanctioned dirt-track racing at annual agricultural expositions.

Two chapters cover the 1970s—the decade marking the start of auto racing's modern era. Chapter six (Resurgence and Insurgence, 1970-1979) traces the rise and decline of USAC's championship division and the short-lived Ontario (California) Motor Speedway. Baby boomers grew up, metropolitan areas grew out, and America's growing population intruded on racetracks. USAC lost Langhorne and Trenton, two of its most storied venues, to suburban sprawl, while NASCAR established a solid schedule of superspeedway races. America became more captivated with southern culture in the 1970s, and NASCAR attracted more northern fans. NASCAR also benefited from a long-standing relationship with the tobacco industry during this time. As NASCAR gained strength and stability, other sanctioning bodies split, formed, and disappeared in this turbulent ten-year stretch.

Developments in American environmental policy took some time to trickle down to American auto racing. As chapter seven (Petroleum and Pollutants, 1970-1979) shows, environmentalism and the environmental movement had an impact on American auto racing beginning in the 1970s. The 1970 Clean Air Act granted auto racing a welcomed exception from a federally initiated phase out of commercial leaded gasoline, but the OPEC embargo made no such discrimination and had a direct impact on motorsports. Motorsports entities mobilized in an effort to protect their sport from a possible federally directed limit or ban on racing. The Federal Noise Abatement Act of 1972 also granted auto racing an exemption from noise statutes. However, states and communities enacted their own ordinances, which led to curfews and muffler-equipped racecars. As the morphing American population moved its residential

neighborhoods closer to racetracks. Politicians and citizens clashed with track owners, racers, and fans—more often than not speedways fell on the losing side.

In addition to showing how NASCAR continued its climb into becoming America's premier motorsports entity, chapter eight (Places, Spaces, and Races: Redux, 1980-2005) explains why temporary street-circuit races held in America's largest cities became a most popular venue for open-wheel racing and how these events transformed local environments. A fourth and final superspeedway boom took place during this period, with implications for the increasingly popular and dominate NASCAR. Meanwhile dirt racing was clearly not dead in many parts of America, and this version of the sport remained resilient in the Heartland. Glimmers of green racing began to take shape when environmentalists confronted developers over the construction of a major racetrack on the edge of Florida's Everglades.

By the early twenty-first-century, as the last chapter (Enviro-Motorsports and the Greener Era, 2006-2008) shows, the relationship between ecology and motorsports heightened, and a "greener era" emerged. A coalition of environmentalists, politicians, and residents thwarted the construction of a massive speedway in the midst of ecologically sensitive salt- and freshwater wetlands on Staten Island. As a result, America's largest metropolitan market still does not have a major racetrack. Only very recently has motorsports clearly developed a greener consciousness. This chapter concludes by examining a proactive effort on the part of the Indy Racing League to embrace green technology, mainly through ethanol fuel. In an era of flex-fuel vehicles and extremely volatile oil prices, the contemporary debate over ethanol's benefits and drawbacks heightened as of late. The IRL's use of ethanol serves as a valuable backdrop in which to examine the environmental, technological, ecological, and economical benefits and drawbacks of alcohol-based fuels in the early twenty-first century.

Although automobile racing, as of late, has become greener, it remains a rather pale shade of green. This study concludes with the assertion that environmental factors will play the biggest role in the future of motorsports. They were a fact in the sport's history, too, and the *fate* of auto racing rests with the physical and natural environment.

CHAPTER 2
PLACES, SPACES, AND RACES: THE BEGINNING, (1895-1918)

Get a horse!

—*Unknown*

A great deal of money [was] left with the Long Islanders by the automobilists and their friends. . . .

—*The Automobile*[1]

Almost certainly, undocumented and unorganized duels between horseless carriages and their drivers began soon after primitive automobiles first chugged out of factories and barns during the 1880s and early 1890s. However, the first organized auto race in the world was held in France in 1894, and a year later, the *Chicago Times-Herald* sponsored the first organized American auto race. Although organizers scheduled the contest for November 2nd, on race day three cars and drivers showed up, with only two cars ready to run. Thus, a November 28th extension was granted to attract additional entrants. However, to ensure that spectators were not completely disappointed, the cars that were prepared on November 2nd competed in a 92-mile-long exhibition match. A Benz-Mueller prevailed with a time of nine-and-half hours at an average speed of ten-miles-per-hour. Usually overlooked by historians, this duel was the first sanctioned race in America.[2]

With the initial event, the natural and physical environment impinged on American motorsports. On November 28th, a wet snow blanketed the streets, but the official event was contested. Six vehicles, including a motorcycle, competed in a round-trip race from Chicago to Evanston. Frank Duryea won this survival-of-the-fittest in his home-built creation. He plodded

[1] "Entries for Vanderbilt Race Close May 15," *The Automobile*, 13 May 1905, 599.

[2] "A Race for Motocycles," *New York Times*, 22 October 1895; "Will Run a Scrub Race," *Chicago Daily Tribune*, 2 November 1895; "Two Fall by the Way," *Chicago Daily Tribune*, 3 November 1895.

along a slushy, 54-mile road course in ten hours and seventeen minutes at an average speed of just under 5-miles-per-hour.[3]

Initially, auto racing was a city sport, where the automobile was most popular. During the 1890s, most American auto contests took place within or on the periphery of large to mid-sized cities, such as Chicago, New York, Philadelphia, and Boston. In a matter of a few years, auto racing branched out of industrial centers to beachfront resort communities and into the American countryside. By the turn of the century, auto sport could be witnessed on open circuits, such as beaches or public roads, and at contained facilities, such as horse tracks or driving parks.

Different combinations, configurations, and surfaces offered various advantages to the testing and sporting use of the automobile. Hard-packed beaches fostered maximum straightaway speeds. The bumps, ditches, and turns of street circuits tested a car's performance and also measured the reflexes, physical toughness, and maneuvering skills of a driver. Unlike road races, where spectators caught a quick glance or two of cars whizzing through one section of a long course, oval circuits allowed spectators to watch machines go by lap after lap for the entire race. Fans also watched mechanics work on the vehicles from the grandstands.

As early bicyclists discovered, beach sand served as an ideal surface for hard-rubber covered wheels. Shortly after the automobile's invention, people started driving on the beach, and some began to feel the quest for speed. From the first days, drivers challenged and repeatedly broke the land-speed record and throughout racing history the fastest straightaway speeds have always been achieved on natural surfaces.

Early beach automobile racing took place in up-scale, oceanside resort communities, such as Atlantic City, and Cape May, New Jersey, but the most famous and longest-running of the

[3] "Duryea Motocycle Wins the Race," *Chicago Daily Tribune*, 29 November 1895; George S. May, "The Thanksgiving Day Race of 1895," *Chicago History* 11 (Fall 1982):175-183.

shore contests were those held at Ormond and Daytona Beach, Florida.[4] These races occurred on a 16-mile stretch of coastline that was approximately 100-yards-wide at low tide. The direction the racecars sped depended on the direction of the wind. The ideal surface at the time contained a particular type of tiny shell found in the composition of sand on the Northeast Florida coast.[5] In 1903, *The Automobile* described the environmental superiority of the beach course to a tee:

> The coquina shell, a small shell of the cockle variety, acts as a binder for the sand of the beach between Ormond and Daytona, making the beach quite different from any other beach in that it is almost as hard as cement. As the beach is perfectly smooth and level, the action of the tide keeps it in excellent condition in mid-winter, when the air is not dry and hot enough between the tides to take out of the moisture and soften the surface.[6]

Coquina (meaning "small shell" in Spanish) served as an important natural aggregate for building construction since Europeans arrived. During the late 1600s Spaniards used the material to build the Castillo de San Marcos in St. Augustine. Designated as a United States National Monument in 1924, the famous fort remains intact. Hundreds of years later and about sixty miles south of St. Augustine, racers found the coquina's properties ideal for another use.

With high temperatures averaging in the upper 50s and lower 60s during January and February, mild winters allowed year-round testing and racing of automobiles on the Florida coast. The timing allowed for maximum attendance and participation because northern vacationers were still in the state in full force and the racing season had not begun yet elsewhere. Auto racing, in some respects, was Florida's first spring-training sport.[7]

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[4] "Tom Cooper's Sand Mile," *The Automobile,* September; "Good Racing Beach at Cape May," *The Automobile,* 25 May 1905, 640-1; "Cape May Races," *The Automobile,* 31 August 1905, 242; "Racing Over the Sand at Atlantic City," *The Automobile,* 6 September 1906, 298-300.

[5] "Outlook for Florida Tournament Planned for January," *The Automobile*, 29 July 1903; "Program of Florida Coast Tournament—Reduced Freight Rates," *The Automobile,* 26 December 1903, 676; "Opening of the Racing Season," *The Automobile,* 28 March 1903, 363.

[6] "European Road Racing Stars Expected at Florida," *The Automobile,* 14 November 1903.

[7] The first year races were contested in late March and early April. "Straightaway Records Smashed in Florida," *The Automobile,* 4 April 1903, 365-366, 386-387.

The resort appeal of Florida also served as a catalyst in the spread of racing from the Northeast and Midwest to the Southeast. Most racers were gentlemen able to afford automobiles (although some competitors were struggling entrepreneurs trying to stake their claim in the young auto industry). Ormond and Daytona Beach served as a social and recreational playground for the wealthy elite, and early auto racing, like polo another Florida winter sport, was a domain of their class. Waterfront hotels were fully booked, and special train routes were established to accommodate spectators. The beach competitions were an early example of a marriage between motorsport and community, as boosters from the growing state sought to attract northerners and foreigners for their tourist dollars. Every January and/or February during "Speedweeks," competitors from all over America and the world traveled to the Florida beach, not simply the province of lounging and picnicking tourists, where the flat, smooth, and hard sand provided optimal conditions for speed and spectator pleasure.[8]

Beginning in 1903, Ormond and Daytona Beach hosted a festival of racing events nearly every winter. Spectators watched from the natural grandstands on the dunes, as drivers battled in series' of races of varying distances between different classes of autos. The biggest spectacles were the world-record assaults in the mile. Although there were other straightaway contests before and after 1903, the most popular American speed-record racing took place on the Florida beach. In their quest for speed, drivers and mechanics modified commercial automobiles, producing the first pure racecars in the mid-1900s. The faster the racecars, the less they resembled a "street" automobile.[9]

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[8] Beverly Rae Kimes, "The Dawn of Speed," *American Heritage,* 38 (November 1987): 93-101; Alice Strickland, "Florida's Golden Age of Racing," *Florida Historical Quarterly* 45, no. 3 (1968): 253-269.

[9] For example, "Preparations at Ormond," *The Automobile,* 14 January 1905, 91-2; "Long Auto Race at Ormond Today," *Chicago Daily Tribune* 30 January 1905; "Chronological Story of Ormond," *Horseless Age,* 2 February 1905, 1; "Florida Beach Situation," *The Automobile,"* 22 April 1905, 504; "Florida Meet Spoiled by Freak Sprinter," *The Automobile,* 31 January 1907, 247; "Ideal Auto Defined," *Washington Post,* 14 June 1914.

Straight-line duels comprised most, but not all, of the scheduled races. For instance in 1909, race organizers created a course and set up artificial markers (flags) separated by 12.5 miles. One flag was placed in Ormond, the other in Daytona, and drivers raced varying distances around the flags. One benefit of a naturally occurring racetrack lay in the fact that it required minor upkeep since the surf and storms kept sand replenished. At the same time, tides and beach conditions made certain sections of coastline better suited for speed, which necessitated yearly modifications of courses. The intrusion of waves not only affected the surface but added an extra element of danger. Drivers jeopardized their lives and the safety of their fellow competitors when they strayed to close to the impeding surf and maneuvered their cars to avoid the sea. Wind also greatly affected the speeds attained on the beach.[10]

Before 1910, wealthy sportsmen began leaving the driving and the danger presented by higher speeds to hired professional drivers. Still, Florida beach racing continued in the years before World War I, and Ormond/Daytona remained an important venue for amateur and professional racers. In 1911, the major events migrated up the coast for a series of races at Pablo Beach in Jacksonville, but Ormond/Daytona Beach quickly remerged as the premier American speed-record venue. Racing on the Florida coast persisted, remaining a critical component of motorsports history until the last major event was held at Daytona Beach in 1958.[11]

Street-circuit racing enjoyed a similar popular following during the first decade of the twentieth century. Designated public roads formed the earliest courses. Cars sped through villages, farms,

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[10] "One Mile—34 1-5 Seconds," *The Automobile,* 28 January 1905, 163-167.

[11] "Outlaw Promoter Apparently Pulls Wool Over Daytona Club's Optics," *Horseless Age,* 22 February 1911, 329; "Racing at Pablo," *Horseless Age,* 30 March 1911, 844; "Speed Meet on the Jacksonville Beach," *Motor Age,* 30 March 1911, 9; "World's Marks Fall at Pablo Beach," *Horseless Age,* 5 April 1911, 604-607. After World War I, most racing activity migrated south from Ormond to Daytona Beach.

and central business districts. As was the case in the beach events, boosterism and location contributed to the mass appeal and success of street racing venues. The Northeast, Middle-Atlantic, and places such as Chicago and Detroit—where much of the wealth and early car ownership was concentrated—accommodated the biggest racing events. Some wealthy car owners took an active role in promoting motorsports. The railroad heir William K. Vanderbilt organized the Vanderbilt Cup, America's first great annual race. Contested on Long Island from 1904 through 1910, the event attracted international drivers and manufacturers and became an American equivalent of the European-style Grand Prix road races of the period. The other great American road race of the era was the Grand Prize. It was held from 1906 to 1915 in cities such as Savannah, Georgia; Milwaukee, Wisconsin; and San Francisco, California. Like the Vanderbilt Cup, the Grand Prize also attracted top European drivers and manufacturers as well as American pilots and brands.[12]

The sport of auto racing developed with little concern of the effects racecars and speedways had on the environment. Unlike the beach, which replenished itself, streets required maintenance, and because dust presented a huge problem from a competition as well as a safety standpoint, oil was applied to the courses. For the inaugural Vanderbilt Cup, workers sprayed 90,000 gallons of crude petroleum on the roads to alleviate dust. Evidently the oil had lasting effects on some sections of the course and kept the dirt and gravel better packed many months after the event. The following year a different substance, an oil-water mixture known as westrumite, kept the circuit better groomed. Although spraying oil on the streets contributed to a better racing surface, residents complained that it made quite a mess because people

[12] There was no Vanderbilt Cup race in 1907. Geoffrey L. Rossano, "Long Island Goes to the Auto Races: The Great Vanderbilt Cup Controversy of 1904," *Long Island Historical Journal* 3, no. 2 (1991): 231-244; "Heath Auto Wins; One Man Killed," *New York Times*, 9 October 1904.

inadvertently tracked the oil into houses and barns, and furthermore, cleaning oil from horse hooves was especially burdensome, to say nothing of what the oil did to groundwater.[13]

Although the oil, speeding cars, and pedestrian traffic on race day presented inconveniences, Long Island residents quickly realized that fast automobiles generated economic benefits. As *The Automobile* commented:

> while many residents of Nassau county admit that to some degree the presence of the high-speed racing cars puts them to inconvenience previous to and during the races, the consensus of opinion is that the benefits accruing, in the way of advertising Long Island and attracting a most substantial class, outweigh any temporary disturbance resulting from the harboring of the automobile army, which incidentally leaves a generous supply of dollars in its trail.[14]

The races brought money to Long Island farmers and merchants, and street-circuit events remained popular in select parts of the country up until World War I, because of this combination of spectacle, technology, and economy. There was a dangerous flip-side, however, and automobile racing on public roads could be just as deadly for spectators as it was for the participants. People often wandered across the Vanderbilt Cup course, and pedestrian autos also found their way onto the streets during the races.[15]

As the number of automobiles—and noise and traffic increased—cities and states started banning automobile racing on public roadways in the early 1900s. Organizers then simply moved races to new cities seeking economic benefits and community pride associated with hosting prestigious nationally known motorsports events. Most major road races moved west and south from the Northeast. For instance, in 1909, a major race took place on a 23-mile course

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[13] "Auto Race Good for Roads," *New York Times,* 1 October 1904; "Trouble Over Auto Race Oil," *New York Times,* 3 October 1904; "Entries for Vanderbilt Race Close May 15," *The Automobile,* 13 May 1905, 599; "All Ready for the Vanderbilt Cup Race," *The Automobile,* 12 October 1905, 398-399; "The Preparations for the Cup Struggle," *The Automobile,* 30 August 1906, 259-261.

[14] "Long Island Again Provides Cup Course," *The Automobile,* 23 August 1906, 226.

[15] "Entries for Vanderbilt Race Close May 15," *The Automobile,* 13 May 1905, 599; "Working on Auto Course," *New York Times,* 8 September 1906.

set up in between the towns of Crown Point and Lowell, Indiana, not far outside of Chicago. As street racing pushed westward, major races were held on lengthy courses in cities, such as Denver, Colorado; Tacoma, Washington; and San Francisco, Santa Monica, and Corona, California.[16]

Although Dixie became famous for oval-track racing fifty years later, street-circuits and beaches served as primary venues for major southern races before World War I. In addition to beach racing at Jacksonville and Ormond/Daytona, Savannah and Galveston Beach served as pre-World War I southern hubs of championship street-circuit racing. The races at Savannah and Galveston were similar to the Florida events in that they were aristocratic-flavored, Kentucky Derby-style social events and more about spectacle, and being seen, than the actual racing that unfolded on the course (similar to the carnival and glitzy atmosphere of today's Formula One events).[17]

Despite the popularity of racing on public roadways, this type of motorsport, even where it remained legal, suffered from problems that eventually led to its demise. Acknowledging the automobile as a replacement for the horse was an issue that many people eventually learned to accept. Putting up with traffic and noise was another issue, and despite the fact that racing stimulated local economies, many citizens did not want automobiles racing invading their quiet

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[16] Two events were held on successive days at the Crown Point/Lowell circuit, known as the Indiana Trophy Race and Cobe Trophy race, respectively. The latter event was also heralded as the "western" equivalent of the Vanderbilt Cup. "Denver Road Race Won by the Colburn," *Motor Age,* 8 July 1909, 6-7; "Grand Prize Race Sanctioned," *Horseless Age,* 13 April 1910, 541-2; "Lozier Wins Elgin Race," *New York Times,* 28 August 1910; "Conditions for Tacoma Road Race," *Horseless Age,* 15 May 1912, 875; "Tacoma Getting Race Entries," *Motor Age,* 19 June 1913,11; "Twenty-five Entries to Date for Tacoma," *The Automobile,* 2 July 1914; "Elgin Course in Good Shape," *Motor Age,* 15 July 1913, 18; Walt Woestman, "Circle City," *Speed Age,* Aug/Sept 1948, 10-11, 28; Harry P. Hunt, "Racing's Golden Era," *Speed Age,* October 1953, 64-75. Due to scheduling issues, there was no Vanderbilt Cup in 1913.

[17] Randal Hall, "Before NASCAR: The Corporate and Civic Promotion of Automobile Racing in the American South, 1903-1927," *Journal of Southern History* 68, no. 3 (2002): 629-668; "Savannah Inviting to Automobilists," *The Automobile,* 15 April 1905, 496; "1910 Season Produced Some Great Racing," *Horseless Age,* 28 December 1910, 910-913.

streets. Even today, residential concerns over race-day congestion remains a pressing issue for speedway operators and street race organizers. Furthermore, race organizers and police found it increasingly difficult to keep spectators safe for these events. It was not uncommon for fans and innocent bystanders to be hurt or killed by the cars. Spectator safety began as an overlooked priority, but gained recognition. These factors led to the demise of the Vanderbilt Cup on Long Island; similarly, auto races did not return to Savannah after 1911. [18]

Oval racing minimized these concerns and consequentially grew at a faster rate than street-circuit competition. Agricultural expositions provided important arenas for early closed-track races. Americans had long before preferred horse racing on oval configured tracks. The massive popularity of that sport during the Gilded Age meant that horse tracks were plentiful by the time racecars came along, eventually sharing the dirt tracks with horses. The first organized American auto race on an oval horse track took place in 1896 at Narragansett Park at the Rhode Island State Fair in Cranston. By the turn of the century, oval racing quickly spread across the country, and these showcases, which pitted cars in constant, close contact, lap-by-lap over lengthy distances, served as tests of endurance and durability for the new machines. Unlike temporary courses set up on public roads, permanent, enclosed structures existed nationwide, and oval tracks soon played the biggest role in the growth and development of motorsports. The faster the cars, the more dangerous the sport became, and as was initially the case in beach and oad racing, wealthy car owners eventually hired drivers to prove their automobile's superiority.[19]

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[18] "Many Entries for Auto Road Races," *New York Times,* 28 August 1910; "Savannah Abandons Road Classics," *Horseless Age,* 13 March, 1912, 518.

[19] M. Wolth Colwell, "America's First Track Race," *Horseless Age,* 1 February 1911, 272-274; "Program of Providence Races," *The Automobile,* 29 August 1903, 220; "September Race Meet at Nassau, N.H." *The Automobile,* 29 August 1903, 220; "Good Sport at New York State Fair," *The Automobile,* 19 September 1903, 272-

Was oval racing safer? It was, and it was not. On self-contained tracks, medical attention was more quickly available. By the time the medical crew received word and rushed to the accident site on a street circuit, they often arrived too late to save lives. Initially, the short straightaways and unbanked turns of horse tracks prevented high speeds. As racecars became more powerful, and purpose-built speedways were constructed with longer straightaways and steeper banks, oval tracks facilitated higher speeds. At the same time, tightly bunched-up cars caused more deadly multi-vehicle crashes, and once the racing action started, a giant dust cloud commonly settled over an entire oval, thus restricting the views of both participants and spectators.

Oval facilities were easier to maintain because unlike street circuits, only a short distance required maintenance. Although usually groomed before competition, weather and civilian automobile use often made street surfaces unpredictable; trees and wandering animals presented hazards that oval racers did not have to contend with. Even though fairground tracks often had little fencing or guardrails, fans were usually confined to the bleachers. Raised grandstand seating made contained circuits safer for spectators at all types of tracks, but roadside fans were always in constant danger of out-of-control cars and flying debris. (Still, throughout racing history, the problem of flying debris has never been completely remedied—regardless of the type of circuit.) Moreover, charging for reserved seating and grandstand admission was easier at oval facilities. Hiring enough bouncers to efficiently patrol a lengthy road course was nearly impossible, and crashing an oval facility to gain free access was similarly challenging.[20]

274; "Fatal Accident at Wisconsin Fair," *The Automobile,* 19 September 1903, 275; "Racing Season Opens in New York," *The Automobile,* 13 May 1905, 591-592.

[20] "Drivers Rebel at Vanderbilt Track," *New York Times,* 3 October 1910.

Motorsports quickly became one of the major sources of income for fairs. Auto races were often the biggest attractions of the annual exposition and primary indicators in how financially successful a fair would be in that given year. During fair week, rail rates were reduced and shopkeepers promoted special sales. The state fair brought people from all surrounding areas to the races. In economic and promotional terms, fairground oval racing was not too different than the Ormond-Daytona Beach events—commerce, advertising, and marketing linked with sport, spectacle, and entertainment. At the same time, the growth of fairground motorsports occurred at the dismay of horsemen, and conflicts emerged when automobile races took place on tracks specifically designed for horse racing. Nevertheless, the use of fairground facilities was a boon to early American motorsports, and oval tracks became the most popular venue for American auto racing—stimulating a need for bigger tracks designed specifically for automobiles. Although street-circuit racing showcased a commercial car's capability in more "realistic" conditions, the superspeedway (tracks one-mile or longer in circumference and designed exclusively for automobile racing) became the new motorsports venue of choice for automakers, drivers, and spectators.[21]

Stadium and speedway construction characterized the Progressive era. The fan base for baseball, basketball, and football expanded, and auto racing was no exception. As the lower- and middle-class became more consumptive, citizens competed in and attended sporting events in greater numbers. By the late 1900s, American auto racing was no longer exclusively a recreational blue-blood activity struggling to gain legitimacy with the general populace, but a full-fledged young *sport* gaining widespread acceptance and here to stay. Fair tracks and other

[21] In 1910, the AAA began awarding a formal championship. For instance, "Ten Miles Under Ten Minutes on a Mile Dirt Track," *The Automobile*, 11 July 1903, 34; "Coast Records Sure to Fall at Los Angeles Meet November 20," *The Automobile*, 14 November 1903, 524.

dirt oval facilities were often incapable of containing larger crowds attending the new sport in growing numbers. At the same time, large baseball and other multi-purpose sports facilities sprang up on the American landscape, new, state-of-the-art, racetracks went under construction serving as "civic monuments"—sources of pride and distinction for growing American cities. Famous examples of these structures of sport included Boston's Fenway Park (1912), Brooklyn's Ebbets Field (1913), and Chicago's Wrigley Field (1914).[22]

Built on the western side of a city of nearly a quarter-million people and initially envisioned as a testing facility for the commercial automobile industry, the Indianapolis Motor Speedway became American auto racing's first civic monument. The inaugural race at "Indy" took place in the spring of 1909 on a surface composed of crushed tar, gravel, and dirt. It is important to point out that its original surface was a failure, and the track fell apart under the attrition of the race. The speedway was immediately repaved with 3,200,000 clay bricks. Forty-two other races were contested in the latter part of 1909 and on Memorial Day, Independence Day, and Labor Day in 1910. These races drew strong crowds, and the popularity of the "Brickyard" kicked off a superspeedway boom. Eventually, speedway owner Carl G. Fisher decided to stage one race at the Indianapolis Motor Speedway with the richest payout in sports.[23] The first Indianapolis 500 in 1911 was a huge success and drew over 80,000 spectators. The

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[22] Steven A. Riess, *City Games: The Evolution of American Urban Society and the Rise of Sports* (Urbana: University of Illinois Press, 1989). Although there is little mention of auto racing in this work, Riess's study is invaluable, and his discussion of the growth of sports such as horse racing, boxing, and baseball share commonalities with auto racing and speedway construction when inserted into the context of the urban development of sports during Progressive Era. Elliott Gorn and Warren Goldstein, *A Brief History of American Sports* (New York: Hill and Wang 1994); Michael McGerr, *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920* (New York: Oxford University Press, 2005).

[23] According to the 1910 U.S. census, Indianapolis's population was 233,000. Carl G. Fisher, Arthur C. Newby, Frank H. Wheeler, and James A. Allison were the principal investors, but Fisher eventually claimed sole ownership of the property. For an account of Fisher's life see particularly his activity in the Florida land boom of the 1920s, see Mark S. Foster, *Castles in the Sand: The Life and Times of Carl Graham Fisher* (Gainesville: University Press of Florida, 2000).

event also showcased one of the most far-reaching innovations passed down from professional motorsports to the commercial automobile. Race winner Ray Harroun and relief driver Cyrus Patschke were the first to use a rear-view mirror and prevailed in this endurance contest, completing the 500 miles in just over six hours and forty-one minutes.[24] This sporting event was quite a spectacle according to the *New York Times*:

> Throughout the thrilling contest a series of succeeding accidents kept the immense crowd in a state of fearful expectancy and kept thousands of eyes strained on the track for a fatal collision that seems imminent whenever several cars flashed close to each other. . . . The crowd was too big to be controlled by a company of militia, and hundreds of special policemen were posted about the grounds.[25]

The construction of Indianapolis kicked off the first American superspeedway boom, which peaked in 1915 and persisted until America's entrance in World War I in 1917. The first American superspeedway boom was nationwide, but some parts of the country were more accommodating to racing than others. As was the case of Indianapolis, superspeedways tended to be constructed in major metropolitan areas, usually at the edge of urban centers and located in close proximity to railroads, making the facilities more accessible to patrons and competitors, and easing the delivery of construction materials.[26]

In addition to the unique brick surface at Indianapolis, track builders turned to two new surfaces, wood and concrete. The success of Indy and the advantages of these new surfaces

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[24] The story of the Indianapolis Motor Speedway has been told elsewhere yet there remains no scholarly treatment of the World's most famous auto race. Terry Reed, *Indy: The Race and Ritual of the Indianapolis 500.* Second Edition. (Washington, D.C.: Potomac Books, 2005) is, by far, the best book on the speedway. Rich Taylor, *Indy: Seventy-Five Years of Racing's Greatest Spectacle* (New York: St. Martin's Press, 1991) is also a fine treatment. "Forty-four Cars will Start in Indianapolis Sweepstakes," *New York Times,* 28 May 1911; Mulford Wants Record," *New York Times,* 4 June 1911.

[25] Marmon Car Wins Death Race," *New York Times,* 31 May 1911.

[26] "Maxwell Averages 91.74 at Omaha," *The Automobile,* 8 July 1915, 58-59; "Maxwell Car Wins First in Omaha Event," *Chicago Daily Tribune,* 6 July 1915; "Full Season for Des Moines," *The Automobile,* 16 March 1916; "Two Races for Uniontown Speedway," *The Automobile,* 26 October 1916, 691; "Uniontown Speedway Program Announced," *The Automobile,* 5 April 1917, 679; "Uniontown's 1 1/8-Mile Speedway to Open Thanksgiving Day," *The Automobile,* 5 October 1916, 593; W. K. Gibbs, "Mulford wins Omaha Valedictory," *The Automobile,* 12 July 1917, 72; "Mulford and Oldfield Win at Uniontown," *Automotive Industries (The Automobile),* 23 May 1918, 1017.

promoted the construction of more superspeedways, and in the 1910s and 20s, board tracks were the most popular racing venues in America. The first of the board tracks opened in 1910 at Los Angeles (Playa del Ray) and in 1911 at Oakland (Elmhurst), California. Most of the wooden speedways were designed by Jack Prince and Arthur C. Pillsbury, and the board tracks served as an integral part of the development process of auto racing as a sport and as valuable testing facilities for automobile, engine, and tire manufacturers. Over time, newer wooden speedways were built with higher bankings and eventually, drivers actually experienced the simulation of a continuous straightaway because the tracks were so circular and steeply banked.[27]

Board tracks were built first in California, but demand for this type of racing surface soon spread eastward to the Midwest and Northeast. No board tracks were built in the Southeast during the first speedway boom. As the name indicates, The Los Angeles Motor Motordrome at Playa del Ray was constructed in close proximity to the beach. The 45-foot, banked oval was composed of 16-foot, two-by-four-inch planks; it was a mile in circumference and seventy-five feet wide. Engineers praised the design of the track but also the suitability of rubber-coated tires on wood. According to the *Horseless Age*:

> Some of the best engineers in the country have been quite free in their praise of the wooden surface, claiming the coefficient of friction is much better than between rubber and any other surface; that there will be much less tendency to heat, and what is generated by friction will be much quicker dissipated than through any other medium.[28]

[27] "1910 Season Produced Some Great Racing," 910-913. "Oakland Motordrome Opened," *Motor Age*, 27 April 1911, 4; Doc Conway, "Remember the Boards," *Speed Age*, May 1947, 10-11; Michael Gianturco, "The Infinite Straightaway," *American Heritage of Invention and Technology* 8, no. 2 (1992): 34-41.

[28] "Los Angeles Motordrome," *Horseless Age*, 19 January 1910, 131.

The grandstands and bleachers, also constructed from wood, were five rows deep and 3000 feet long. This design provided good views and also prevented too many spectators from being bunched up, which was often the case in general admission seating at fair facilities.[29]

Wooden speedways, like racecars, served as technological models of early twentieth-century ingenuity and the racing world, as well as the media, marveled over the tracks. But at the same time, despite the fact that thousands of trees of different varieties were used for board-track automobile racing, media accounts provided little to no mention of the type of lumber used, nor where the lumber originated, in the construction of these facilities. Nevertheless, engineers and builders surely accounted for the wood types with regards to hardness, durability, and heat absorption when designing tracks. When available, locally harvested timber would make most sense economically and for making repairs and occasional modifications. Unlike fairground dirt ovals, board tracks were innovative and responsive to changes in the sport. Like natural sand, the smooth wood accommodated wicked speeds. As newer board facilities featured longer straightaways and higher banks, the aesthetic of speed intensified and the racing became faster and deadlier.

The speed, thrill, and tire hum of board tracks made them popular nationwide. By the mid-1910s, they replaced street circuits as the dominate type of track on the AAA championship schedule. For instance, Tacoma was the northwestern hub of major American auto racing, and after the championship street races were discontinued in Tacoma, an oval track was promptly built in that city to satisfy racing fans in the Pacific Northwest. According to the *Automobile*, about 2,000,000 board feet of Douglas fir was used to build the speedway in 1915. This

[29] "Los Angeles Motordrome," *Horseless Age*, 19 January 1910, 131; "Progress Being Made on Board Track," *Horseless Age*, 23 February 1910, 306; "Oakland Saucer to Open this Month," *Horseless Age*, 11 January 1911, 129-130.

coniferous tree, indigenous and plentiful in the heavily forested Pacific Northwest, provided a sturdy wood for board track construction and economy in its local availability. The two-mile-long board track existed until 1921.[30]

In addition to California and Washington, the Midwest became a board track hotbed. The racing industry built a two-mile long track at Sharonville in suburban Cincinnati, and shorter board tracks in both Omaha and Des Moines. Farther east, the popular and successful Uniontown Speedway, outside of Pittsburgh, was constructed in 1916, and was the last board track built before the United States entered World War I. Additional board tracks did not appear until the early 1920s.[31]

By 1915 Chicago had its first superspeedway. A 315-acre weeded parcel of vacant land near nine transportation lines and a ten-minute automobile drive from Chicago's business center served as the site for the two-mile wooden speedway. Because the track was not quite close enough to a railroad, horse-drawn buggies brought building supplies to the construction site, where fourteen million feet of two-by-four-inch boards were assembled in forty-seven days. The track was 60 feet wide on the front stretch and 50 feet wide on the back stretch straightaway, but 70 feet wide in the turns, which fostered safer passing and more side-by-side action on the corners. Designers conceptualized this configuration to "secure a speedway that will be safe and

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[30] "Tacoma Speedway Nears Completion," *The Automobile,* 6 May 1915, 828; "Stutz and Maxwell Star at Tacoma," *The Automobile,* 9 July 1914, 70-71; "Mercer Dual Winner at Tacoma," *The Automobile,* 8 July 1915, 57-58. W. Scott Prudham, *Knock on Wood: Nature as Commodity in Douglas Fir Country* (New York, Routledge, 2005).

[31] "Maxwell Averages 91.74 at Omaha," *The Automobile,* 8 July 1915, 58-59; "Maxwell Car Wins First in Omaha Event," *Chicago Daily Tribune,* 6 July 1915; "Full Season for Des Moines," *The Automobile,* 16 March 1916, 516; "Racetrack Planned for Omaha," *The Automobile,* 5 November 1911, 868; "Cincinnati Gets Auto Speedway, Ready Next Fall," *Chicago Daily Tribune,* 10 April 1915; "2-Mile Speedway for Cincinnati," *The Automobile,* 13 January 1916 109; "36 Cars Entered for Cincinnati," *The Automobile,* 31 August 1916, 377; Russ Lewellen, "Uniontown's Wooden Racetrack Thrilled Fans and Drivers," *Pennsylvania Magazine,* 20 (February 1997): 32-34.

at the same time produce interesting competition."[32] Part of a sports complex, the speedway was adjacent to a polo field and had a golf course in the infield.[33]

The boards were assembled in a similar manner as bowling alleys and gymnasiums but had a relative short life because the wood was left untreated. For example, the Omaha track survived a little over two years; because of its poor construction, holes in the 1.25-mile track had to be filled with cement and asphalt. Maintenance was costly, especially in snow-prone areas such as Omaha, Chicago, and Des Moines, cities known for hard winters. Board tracks were short-lived in the Los Angeles area, too, but for a different reason. Commercial and residential sprawl began engulfing speedways in the Golden State before World War I.[34]

Although the boards became the surface of choice for championship racing, concrete edged into the scene. Concrete offered durability, and unlike the short life span of board track racing as a whole, remains today. The first great concrete racetrack, the two-mile, high-banked, Twin City Speedway was built in 1915 on 342 acres south of Minneapolis and located between the suburban communities of Ft. Snelling and Minnehaha in close proximity of the Minnesota and Mississippi Rivers. This state-of-the-art superspeedway had a seating capacity of over 70,000,

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[32] The track was in the Maywood section of Chicago. "A 2-Mile Board Speedway for Chicago," *The Automobile,* 17 December 1914, 1137.

[33] None of the sources investigated mentioned the type of lumber used in track construction. "A 2-Mile Board Speedway for Chicago," *The Automobile,* 17 December 1914, 1137; Reed L. Parker, "New Speedway is a Marvel Says Carlson," *Chicago Daily Tribune,* 6 June 1915; "Wiehe Builds Speedway in Spite of Woes," *Chicago Daily Tribune,* 26 June 1915; "250-Mile Race for Chicago," *The Automobile,* 8 March 1917, 500. "Chevrolet Victor in Chicago Derby," *Automotive Industries,* 27 June 1918, 1288.

[34] Borgeson, *Golden Age of the American Racing Car*; "Maxwell Averages 91.74 at Omaha," *The Automobile,* 8 July 1915, 58-59; "Maxwell Car Wins First in Omaha Event," *Chicago Daily Tribune,* 6 July 1915, 14; "Full Season for Des Moines," *The Automobile,* 16 March 1916, 516.

was close to railroad lines, and located alongside four main highways that linked the Twin Cities.[35]

To ensure its completion before the first scheduled race in the late summer of 1915, constructors built the Twin City Speedway surface in haste, leaving a bumpy and unsafe surface. The massive track cost more than estimated, and investors quickly lost money. Nevertheless, 40,000 spectators attended the inaugural event, a 500-mile test of endurance, on a sunny afternoon on September 4. The track's rough surface contributed to lower speeds, poor racing, and more wear-and-tear on the cars than boards or dirt caused. Only six out of the starting twenty-five vehicles completed the full 250 laps.[36]

The following year the Twin City Speedway continued to lose money after a disastrous and poorly promoted event that spring generated poor gate receipts, which failed to meet the funds of the promised purse. The first of many speedway causalities in the Twin Cities throughout the century, the speedway went into receivership in June 1916. Any hope of bringing racing back to the concrete oval was ended by metropolitan growth, a tale of future tracks around the country. The Twin City Motor Speedway's location between Minneapolis and St. Paul proved to be too valuable, and a few years later the site was converted into the city's international airport. The failure of Twin City also somewhat indicated an American preference for dirt and board surfaces. Thus, despite the popularity of the Brickyard, wood that became the

[35] "2-Mile Saucer for Twin City Races," *The Automobile,* 5 November 1914, 869; "Two Speedways Promised for St. Paul," *The Automobile,* 15 April 1915; "Twin-City Speedway Under Way," *The Automobile,* 6 May 1915, 828, "New Minneapolis Speedway to be Finest in Country," *Fargo Forum,* 29 June 1915; "America's First Concrete Speedway," *The Automobile,* 2 September 1915, 434.

[36] "Stutz Wins First and Second Places at Twin Cities," *The Automobile,* 9 September 1915, 455-456.

preferred surface for speedway developers, and the board tracks, with their fantastic speeds and massive grandstands, became the big draws.[37]

With the major exception of the Indianapolis Motor Speedway, all of the purpose-built wooden and concrete superspeedways erected in between 1909 and 1917 were gone by the early 1920s. Smaller dirt facilities, on the other hand, had a great deal more staying power. They were cheaper to construct, easier to maintain, and better suited for climate change. Unlike the superspeedways, the majority of dirt facilities existed far enough in the American hinterlands that sprawl was a non-factor. As superspeedways cropped up throughout America, many areas still thrived with dirt track racing on fairground facilities. Professional auto racing was the biggest draw at some of America's largest fairs, but despite the sport's growing popularity in the 1910s, fair operators had an increasingly difficult time landing AAA-sanctioned races for their dirt tracks. The AAA tended to shun dirt, except for a few mile-long-ovals, mainly in the Midwest (Columbus, Ohio; Sioux City, Iowa; and Galesburg, Illinois) or on the West Coast in Los Angeles. The AAA's selectiveness threatened to stunt big-time motorsports on that type of racing surface, especially in smaller markets that could not afford the high sanctioning fees. In addition, the AAA Contest Board preferred hosting races at Indianapolis Motor Speedway, board or concrete tracks, and street circuits, and rarely staged races at short (half-mile) horse tracks, which could not accommodate the massive crowds commonplace at the major speedways.[38]

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[37] "De Palma Wins Twin City 150-Mile Race," *The Automobile,* 6 July 1916, 1, 42; "15,000 See Races at Twin Cities," *The Automobile,* 1 June 1916, 998.

[38] The Sioux City track was located in South Dakota. "Rickenbacher Wins 300-Mile Race at 78.6 Miles Per Hour," *The Automobile,* 9 July 1914, 66-67; "Wishart Creates New Records At Columbus," *Horseless Age,* 28 August 1912, 301; "Burman Wins Match Race," *Motor Age,* 8 April 1915, 14; "Records Broken at Galesburg Dirt Track," *The Automobile,*´29 October 1914, 824; "Boiling Oil Petrifies Track for Sioux City Races," *The Automobile,* 2 July 1914, 26; "Hawkeye Track in Poor Shape for Race Today," *Chicago Daily Tribune,* 3 July 1915; Sioux City Track

The AAA also enforced strict fencing and guardrail specifications for horse tracks and demanded that dirt track operators use oil or other non-equine friendly chemicals to alleviate dust. Calcium Chloride became the track treatment of choice but had the potential to blind a driver or spectator. For example, in a 1914 AAA-sanctioned dirt track race in Brighton Beach, New York, 1909 AAA champion Ralph DePalma nearly lost his sight when calcium chloride got under his goggles. As the first superspeedway boom peaked by 1915, the AAA abandoned sanctioning motor contests on dirt tracks shorter than one mile. Very few fairground facilities offered tracks larger than a half-mile, forcing many fair operators to choose between the cars or the thoroughbreds.[39]

Most of the races held on the board and concrete speedways were between professional drivers and AAA-sanctioned, but many fair races drew local competitors and/or outlaws who barnstormed the country. The term "outlaw" goes back to the beginning of auto racing. They were drivers who raced without sanctioning-body affiliation. As the sport grew, and as the AAA assumed greater control of American auto racing, many drivers and promoters reacted by organizing their own non-sanctioned races.

Some "races," especially those at state and county fair events, were not really races, but staged events. This practice of "hippodroming" grew in the mid-1910s, as longtime AAA official Fred Wagner explained:

> [Barney] Oldfield was about the first to start the "hippodrome" or circus style of racing—that is the sport which is scarcely real racing, although it may be spectacular. . . . Of course at meets run by Oldfield's manager, Barney always would have to be the star, and

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Hard on Cars," *The Automobile,* 8 July 1915, 56; "Cooper's Stutz Wins Ascot Race," *The Automobile,* 8 March 1917, 500.

[39] "1914 – A Good Contest Year," *The Automobile,* 24 December 1914, 1147, 1183.

> of course, he would drive the fastest car in the stable. . . . At close finishes Barney was an artist, often managing to win by less than the width of a tire.[40]

Although auto racing spread across the country in the early 1900s, most American fairgoers had never seen professional racers or a bona-fide racing superstar. That changed when in 1907 Oldfield went on a historic barnstorming tour. The cigar-chomping daredevil appeared at fairs all across the country with his car, the Peerless Green Dragon, and took part in exhibition races with his staged competitor, Bruno Seibel. They intentionally raced close and tight, with Oldfield always defeating Seibel's Red Devil at the end (unless Oldfield had car trouble). Oldfield's tour was important because it indicated auto racing's potential as an exhibition as opposed to a competitive sport, and it was apparently the first time true racecars (built exclusively for the speedway) appeared in many American cities and towns. This spectacle appeal would become a major factor in the developing popularity of American auto racing.[41]

Close, fast races with neck-to-neck finishes generated great crowds. But, the AAA frowned upon phony racing. The Contest Board's fears were real, because showmanship not sport became a major part of racing. The AAA saw hippodrome races not only as a nuisance but also as a threat to the legitimacy of their events and prohibited any of its licensed drivers from racing outside of the association, fining or suspending those who did.[42]

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[40] Fred Wagner, "Automobile Racing in America," *Colliers,* 11 January 1913 suppl., 40.

[41] Peerless was a Cleveland, Ohio-based automobile manufacturer in existence until the mid-1930s, and appeared in a limited number of major American auto racing events. "Green Dragon and Red Devil Here," *Fargo Forum,* 24 July 1907; "World's Records Will Be Smashed," *Fargo Forum,* 25 July 1907; "Peerless Pilot Awaits Signal," *Fargo Forum,* 26 July 1907; "Auto Racing to Be Big Feature," *Fargo Forum,* 27 July 1907; "Oldfield Lowers World's Record," *Fargo Forum,* 30 July 1907, 8. A rather vague and light-hearted account of Oldfield, is William F. Nolan, *Barney Oldfield: The Life and Times of America's Legendary Speed King* (New York: Putnam, 1961).

[42] Since the first race, there has always been a degree of show business to motorsports. The question of whether the fans are provided a good show and getting their money's worth was more prevalent in auto racing than in other sports.

The year 1915 became a most important year in American auto racing development. Because the AAA mostly abandoned fairground racing, members of the American Association of Fairs and Expositions founded the International Motor Contest Association (IMCA) in Chicago, Illinois, on March 29 of that year. People associated with the fairs realized the profit potential of racing and determined they could better serve their interests by creating their own independent racing series. The IMCA only sanctioned dirt track racing at fair facilities. Fair leaders from the Midwestern states of Minnesota, Iowa, Illinois, Oklahoma, and Michigan spearheaded the endeavor.[43] Gaylord White, long-time IMCA promoter, reflected:

> Legend, still current among IMCA oldtimers, credits officials of the Minnesota State Fair with leading the fight. The result of what was considered an excessively stiff AAA levy against that event. Complaints that AAA officials were cluttering the fairground tracks, at big salary and expense to the fairs, added fuel to the flame.[44]

It is imperative to point out that although countless IMCA races were hippodromed, the formation of the IMCA indicated that the sport of auto racing had grown too popular nationally to be encompassed by only one organization. Competitors who raced in the inaugural IMCA campaign in 1915, such as Louis Disbrow, Johnny Raimey, and Eddie Hearne (all of whom competed at one time in the AAA), were professional drivers whose racecars were similar to the ones that appeared in AAA-sanctioned races. Unlike the AAA championship events, the IMCA sanctioned short, sprint races. The AAA schedules contained speedway and street events ranging from 100 to 500 miles sometimes between 20 to 30 racecars, but IMCA events were less

[43] Keith Knaack ed., *IMCA Records Volume 1* (Cedar Rapids, IA: Crest Microfilm Inc., 1985); "Fair Directors Quit National Auto Race Body," *The Chicago Daily Tribune*, 30 March 1915; Brian Pratt, "Fairground Dirt: The International Motor Contest Association in Canada" (Unpublished, in possession of author).

[44] Gaylord White, "IMCA," *Speed Age*, July 1953, 8.

than 50 miles long and almost always on half-mile converted horse tracks with usually no more than eight cars on the track at the same time.[45]

As a result of the IMCA's formation, professional drivers and state-of-the-art racecars found new outlets. The IMCA granted sanctions to fairs all across the country, in places such as Sedalia, Missouri; Peoria, Illinois; and Hibbing, Minnesota. Many fairs guaranteed auto races, fixed or not, at least once a year. With the establishment of the IMCA, Huron, South Dakota; Grand Forks, North Dakota; Missoula, Montana; and other small- to medium-sized cities scattered throughout America introduced professional auto racing to the masses. [46]

Dirt-track racing planted deep roots in the middle of the country, and many locales in which the IMCA first held auto races in 1915 remain as some of America's most successful dirt track auto racing markets. Over time, the new organization provided more drivers with more opportunities to race, and the IMCA catered to drivers who were uninterested (or lacked the required funding and racecar technology) to compete on the AAA circuit. That entrenchment cannot be overemphasized, and no portion of the United States remained more committed to racing on dirt surfaces than the Heartland. Barney Oldfield, the agricultural fair, geography, and the formation of the IMCA contributed a regional preference for dirt track racing that has withstood the test of time.

After the United States entered World War I, the Indianapolis 500 shut-down in 1917 and 1918, and although motorsports did not completely cease, races were less frequent. The AAA

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[45] Keith Knaack ed., *IMCA Records Volume 1* (Cedar Rapids, IA: Crest Microfilm Inc., 1985);

[46] Knaack, *IMCA Records: Volume 1*, Keith Knack, *IMCA Records: Volume 7* (Cedar Rapids, Iowa: Crest Microfilm, 1985). John Sawyer, "The Cars Were Steel, the Men Were Stronger," *Open Wheel*, February 1983, 48-51, 85-86; Don Radbruch, "Hard-to-Get-To Montana Hosted Several Early Races," *National Speed Sport News*, 25 October 2006, 14; "De Palma Gets 50-Mile Record," *The Automobile*, 26 October 1916, 691.

maintained its place as the top American racing entity, and a few of the biggest IMCA names, such as Hearne and Tommy Milton, permanently switched over to the AAA to race at Indianapolis Motor Speedway and for the national championship (Milton won the Indianapolis 500 in 1921 and again in 1923). By this time, it was apparent that motorsports in Europe and the United states would develop in respective ways. Unlike Europeans, Americans quickly became intolerant of the use of public roadways for automobile racing. The end of the Long Island, Savannah, and Santa Monica races represented a widespread American attitude against racing on public roads. The demise of road racing opened the way for the growth of oval tracks, which survived after the end of World War I—with championship cars racing predominately on the boards or bricks, and other types of cars on dirt.

CHAPTER 3
MINOR LEAGUES, FUEL, AND THE GREAT DEPRESSION, (1919-1944)

Why do you want to break into the racing game?

—*Eddie Skinner*[1]

For the last four years the winning drivers in the world's racing classic at Indianapolis have used Ethyl gasoline.

—*Unknown*[2]

After World War I, well-financed national racecar drivers shared speedways with home-built speed machines and local and regional racing heroes. The growth of all types of motorsports in the 1920s originated from an abundance of inexpensive new autos, development of specialized racing component companies, a nationwide increase in disposable income and recreational activities, the emergence of new sanctioning bodies, and revitalized agricultural fair economies. During this period, American-born drivers and domestically constructed racecars dominated automobile racing in the United States. Americans embraced various types of motorsports, and regional distinctions continued to take shape. By the end of World War I, the internal-combustion engine had become an everyday part of American life—more cars meant more racing, and men and women converted domestic automobiles into racecars with more efficiency. The distinction between pure racecars and stock cars intensified during this period, looking and performing less similarly.

After the war concluded, and throughout the 1920s, American automobile racing occurred almost exclusively on dirt or wood. The IMCA, smaller entities, and grassroots racers stuck to the dirt tracks; the AAA championship schedule dominated the boards, with two-thirds of all

[1] Eddie Skinner, "Breaking into Dirt Track Racing," *Popular Mechanics*, April, 1934, 562.

[2] *Atlantic City Speedway Official Souvenir Program*, 7 May 1927.

AAA-championship races taking place on wooden speedways from 1915 to 1931. The entire 1918 season took place solely on board tracks.[3]

Before the depression, championship board track racing was the most glamorous, popular, expensive variety of American motorsports. A second superspeedway boom ensued shortly after the conclusion of World War I, and, as in previous years, the board tracks were stadium-like in design and tended to be located on the edge of cities usually in close proximity to railroads. The machines that raced on the boards were true racecars, and many of the aerodynamic and mechanical modifications made to accommodate the steep boards were not suitable for highway use. Although this form of motorsport was exciting, it was also deadly. The tracks became more dangerous as they deteriorated; the wooden saucers shredded during the races, and splinters became projectiles that pierced the drivers' meager protective gear. Board track racing has an interesting place when inserted into a greater techno-historical context. These were short-lived, purpose-built facilities—almost futuristic in terms of technology and speed, but way behind the times in safety. Frankly, the board era came too soon, but as with home construction they reflected the widespread availability of a natural resource before its demise.[4]

After World War I, California, the Midwest, and eastern seaboard served as board track racing's main "hubs." In 1920, a new 1.25-mile board track known as the Los Angeles Speedway went up in the small southern California enclave of Beverly Hills, and that same year, Fresno had a new board track. In 1921, further north of Oakland, a 1.25-mile track was built at

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[3] There was no Indianapolis 500 in 1917 or 1918. "A.A.A. Control for Racing," *Automotive Industries*, 14 March 1918, 571; "Racing Events More Popular," *New York Times*, 10 January 1926; The AAA did sanction other races on different surfaces (including dirt), but none of the dirt events during this period had championship status.

[4] "Speedway for Kansas City," *Automotive Industries*, 9 March 1922, 593; "Driver Sarles Killed, 9 Hurt, at Kansas City," *Chicago Daily Tribune* 18 September 1922; "Race at Kansas City Won By Eddie Hearne," *Automotive Industries*, 5 July 1923; "Tommy Milton Wins Kansas City Race," *Automotive Industries*, 21 September 1922, 591; "Fourteen Cars Start Today in Kansas City Race," *Chicago Daily Tribune* 21 October 1923; Catlin, "The Wooden Wonders."

Cotati, and another of the same length was constructed at San Carlos, just outside of San Jose. Despite an ideal dry and mild climate and generally solid attendance, all of the board tracks in the state were short-lived. Historically, sprawl was the major environmental force that impeded auto racing in southern California. But the demand for motorsports persisted, and auto racing always seemed to find a new home in the Los Angeles area. As soon as one track disappeared, a new one emerged. The same year the Beverly Hills track disappeared, a new Los Angeles track was erected in nearby Culver City. People were hungry for racing, and, if there was enough capital and manpower to build a track in the 1920s, it was built. Lumber was inexpensive to construct racing facilities that rarely lasted more than a few years, and depleting a forest raised few complaints.[5]

The AAA championship series spanned both coasts. New Jersey was also a national auto racing hotbed, and home to two board tracks, Woodbridge and Atlantic City. The Atlantic City track was existed on the former site of the military arsenal of Amatol on a tract of meadow land in the town of Hammonton within the south Jersey Pine Barrens. Environmentally, this sparsely populated part of New Jersey resembled the coastal Southeast, known for its flat terrain, evergreen trees, and coastal wetlands. Built alongside the Pennsylvania Railroad, the 1.5-mile long, and 50-foot wide oval, had slightly banked 1,750-foot-long straightaways and 45-degree-banked turns. Constructed out of 16-foot-long two-by-fours, the Atlantic City Speedway seated approximately 50,000 spectators. With $500,000 of Bethlehem Steel Money, Charles Schwab and Dr. M. R. Ward financed the construction of the Atlantic City Speedway. Board tracks were an investment, and built for profit with private or corporate money, unlike the fair tracks,

[5] Harold Osmer, "Los Angeles Speedway," *Speedway Illustrated*, April 2007, 86-87; "Elliot Sets Mark in Cotati Contest," *Automotive Industries*, 10 August 1922, 300; Peter De Paolo, "I Drove the Boards," *Speed Age*, May 1952, 42-43, 66, 68-69; "Hill Wins Fresno Race in Miller Special Car," *Automotive Industries*, 5 October 1922, 688; Gene Banning, "60 Years Ago: 1924 was a Milestone in the Evolution of Auto Racing," *Auto Racing Memories and Memorabilia*, Spring 1984, 6-9.

essentially built with fair revenue and managed by elected or appointed state and county fair commissions. The Atlantic City board track served beyond the needs of the AAA championship division and hosted local races and a 30,000-mile Studebaker endurance run.[6]

After the final beach races at Galveston, Texas (a state that more closely resembled Midwestern racing development) in 1914, AAA championship racing was non-existent in the South with two major exceptions. In Pineville, just outside of Charlotte, a board track hosted a series of championship and other races from 1924-1927; the other major southern board track was located in Miami, Florida.[7] The Fulford-Miami Speedway was part of Indianapolis 500 and Miami Beach founder Carl G. Fisher's south Florida development empire. A lone championship race took place on a Monday afternoon—the Washington's Birthday holiday—in February 1926 at the height of the cold season up North and the tourist season in Florida. The 1.25-mile track featured, at the time, some of the fastest oval-track speeds ever recorded, and 20,000 spectators watched Peter DaPaolo capture the Carl Fisher Trophy, being the first to complete the 300 miles. The thriving city was a year-round playground and home to a vibrant horse racing, polo, golf, and jai alai scene, and a state-of-the-art racetrack in south Florida made a great deal of social, economical, and recreational sense. However, the track—located in present-day North Miami Beach, only a few miles from the Atlantic Ocean—made little environmental sense as it happened. The famously destructive Miami Hurricane of 1926 turned it back into timber that September. Because the track was likely built out of local, termite-resistant Caribbean pine, an

[6] Herb Anastor, "The Atlantic City Boards," *Open Wheel*, February 1987, 80-89; "Atlantic City Plans $4,000,000 Speedway," *Automotive Industries*, 23 November 1925; "Big Speedway for Jersey," *New York Times*, 27 January 1926; "De Palma will Race on Speedway Track," *New York Times*, 18 April 1926; "13 Drivers Qualify for Auto Classic," *New York Times*, 29 April 1926; Robert L. Cusick, "Hartz Wins First Race on World's Fastest Track," *Automotive Industries*, 6 May 1926, 762-763.

[7] "More Cities Show Desire to Construct Speedways," *Automotive Industries*, 30 November 1922, 1107; "Charlotte Race Won By Milton," *Automotive Industries*, 790; "Earl Cooper Wins Charlotte Race," August 1926, *Automotive Industries*, 883; "Race at Altoona Won by Murphy in Miller," *Automotive Industries*, 19 June 1924, 1357; "Auto Races Attract 22,500," *Washington Post*, 20 September 1927; Hall, "Before NASCAR."

ideal wood for board track construction, the wood, according to local lore, that was salvaged was used to rebuild the city (some buildings apparently still have original racetrack wood in their structures).[8]

Miami was an omen. The rest of the wooden speedways were gone by the early 1930s. Board tracks did not survive beyond the depression, and some of the facilities were turned into firewood or building material. Part of their fate was attributed to the fact that the novelty wore off, and board track racing became less of a spectacle. Plus, the costs of repairing and maintaining the facilities became too great for investors as forest resources were disappearing and timber prices were increasing. Woodbridge, New Jersey, hosted the last AAA championship board track race in 1931.[9]

As a whole, even without the support of the AAA championship division races, and despite the growth of AAA-sanctioned events on the boards and Indianapolis bricks, the popularity of dirt-track racing accelerated after the war. Dirt track racing assumed its own identity throughout the country. In 1919, the *Fargo Forum* summed up the "duality" of the post-World War I American motorsports scene:

> Speedway racing is having a formidable rival in 1919 in dirt track auto racing, which is fast becoming a popular sport over the country. The fact that cars built especially for dirt track racing can attend and compete at ten times as many races as on superspeedways is partially responsible for this.[10]

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[8] According to the *New York Times,* 30,000 witnessed the race. "Miami Prepared to Entertain Vast Visiting Throngs," *Washington Post,* 27 December 1925; "Speed Trials Delayed," *Miami Herald,* 20 February 1926; "Drivers in 300-Mile Fulford Race will Qualify Today," *Miami Herald,* 17 February 1926; Howard S. Purser, "Ralph Hepburn Clicks off 141 Miles an Hour," *Miami Herald,* 18 February 1926; "Cooper, Milton Expected to set Fulford Lap Records," *Miami Herald,* 19 February 1926; Steve Hannagan, "Cooper and M'Donogh Favored in 300-Mile Race," *Miami Herald,* 22 February 1926; "De Paolo Triumphs, Sets World's Mark," *New York Times,* 23 February 1926.

[9] Russ Catlin, "The Wooden Wonders," *Automobile Quarterly* 4 (Spring 1971): 256-265.

[10] "$5,000 Offered in Purses for Auto Races in Fargo July 26," *Fargo Forum,* 26 May 1919.

State fair tracks such as Wisconsin (Milwaukee), and Iowa (Des Moines), whose urban locations attracted many rural spectators, played a large role in this boom, but more significant, were the widespread local speedways and county fair facilities that nurtured the dirt-track version of the sport. Rural America and smaller locales such as Winchester, Indiana; Ord, Nebraska; and Grand Forks, North Dakota, assumed dirt track racing's biggest popularity base after World War II.[11]

Like other forms of fairground entertainment, such as the circus and the rodeo, auto racing provided a major source of fair revenue, and almost every county, especially in rural America, had a fairground. Since its inception in 1915, the IMCA carved a niche in the Heartland, and by the 1920s, firmly established itself as a regional organization that contested races mostly in Midwest and Great Plains, but also in other parts of the United States and Canada. At the same time, the grassroots growth of racing led to the emergence of minor-league entities, which provided drivers and spectators with regional and locally organized racing. One notable regional entity, established in the 1920s, was the Dayton, Ohio-based, Central States Racing Association (CSRA). Auto racing outpaced existing entities, and new organizations formed. Smaller markets developed self-sustaining, dirt-track auto racing scenes and no longer depended on national entities such as the AAA, and IMCA, to bring motorsports to their respective communities.[12]

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[11] For example, Don Radbruch, "Well Known for Motorcycles, Sturgis Once Hosted Auto Races," *National Speed Sport News*, 3 May 2006, 14; Bob Wilson, "Origins of the Marion County Fairgrounds: Knoxville Raceway," *Vintage Oval Racing*, August 2005; Terry Reed, "Indiana Gothic: Frank Funk's Winchester Speedway, Part I," *Open Wheel*, June 1993, 67-76.

[12] A primary account by a man who raced throughout the Midwest in the 1920s is John B. Gerber, *Outlaw Sprint Car Racer* (Marshall, Ind.: Witness Productions, 1997). Mary Lou LeCompte, *Cowgirls of the Rodeo: Pioneer Professional Athletes* (Urbana: University of Illinois Press, 1993); "Stars of 'Dirt' Track Compete in Races Today," *Chicago Daily Tribune* 21 October 1923; Don Radbruch, *Dirt Track Auto Racing: A Pictorial History, 1919-1941* (Jefferson, NC: McFarland, 2004); Fox, *The Illustrated History of Sprint Car Racing: Vol. 1, 1896-1942*.

Dirt-track racing, before World War II, was not limited to the Heartland. Dirt was the major racing surface throughout most of America, and many people had never witnessed a race on any other type of surface. Although California was known for its early history of street-circuit events and seven board tracks, dirt-track racing on ovals was immensely popular in the Golden State. In 1924, auto racing began at Legion Ascot Speedway in Los Angeles, and the importance of this dirt speedway in the development of motorsports in the American West cannot be exaggerated. The track, among the first to feature night racing, was an American racing hub during the winter, and Legion Ascot developed many of the western drivers that later became successful at Indianapolis.[13]

After World War I, the majority of motorsports technological and cultural innovation originated from Los Angeles and the surrounding area. However, a major engineering development, with most expansive long-term global consequences, began in 1921 at General Motors' Research Laboratory in Dayton, Ohio, when a team of scientists, headed by Thomas Midgley, discovered that the addition of a small amount tetraethyl lead to gasoline reduced engine knock. According to one mechanic, "engine knock also called spark knock or detonation, occurs in the combustion chamber when an unburned air/fuel mixture is ignited a second time, not the by the spark plug, but by pressure and heat in the cylinder. This usually happens because of improper engine timing or incorrect fuel [low octane] and can be a serious problem resulting in anything from poor engine performance and the characteristic "pinging" sound under moderate acceleration, to

[13] "Legion Track Plans Night Auto Events," *Los Angeles Times*, 7 July 1930; Harold Osmer, *Where They Raced: Auto Racing Venues in Los Angeles, 1900-1990* (Chatsworth, CA.: by the author, 1996); John Lucero, *Legion Ascot Speedway* (Huntington Beach, CA.: Orecue, 2002).

severe engine damage."[14] Lead provided the "magic bullet" in the reduction of knock. In 1924, General Motors and Standard Oil of New Jersey formed the Ethyl Corporation to market the fluid.[15]

Although knock had been an issue in the early gasoline-powered, internal combustion engines, it presented an even larger problem as designers built more powerful, higher-compression engines, which required higher octane to operate smoothly. In no place were engines more powerful and so consistently under strain than at the racetrack. Evidently, tetraethyl lead made its first major racetrack appearance in a racecar at the 1923 Indianapolis 500, the car of the winning driver, Tommy Milton. Apparently, racers used lead throughout the season, and according to Midgley, the substance provided both more octane and essential lubrication required in high-compression racing engines. As was always the case in American automobile racing, the engine was the most expensive component, and saving an engine could result in the saving of millions of dollars.[16]

While the performance aspects of lead were showcased on the racetrack, in 1924-25, lead exposure caused severe illnesses and violent deaths at Standard Oil and DuPont plants in Elizabeth and Deepwater, New Jersey, respectively. About forty workers became sick and two died at the General Motors Laboratory in Dayton. The media picked up on these tragedies, generating a public scare, and many state and municipal governments banned the use of

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[14] Email correspondence with Mark Cole, 8 January 2009.

[15] "New $5,000,000 Gasoline Concern," *New York Times,* 24 August 1924; du Pont Corporation (a major shareholder in General Motors as well as a producer of tetraethyl lead) was also involved in this venture.

[16] There is little scholarly literature on the connection between lead and motorsports. One notable exception appeared over eighty years since Milton's win. Joseph O'Neil, Gregory Steele, C. Scott McNair, Matthew M. Matusiak, and Jyl Madlem, "Blood Lead Levels in NASCAR Nextel Cup teams," *Journal of Occupational and Environmental Hygiene* (February 2006): 67-71; Borgeson, *The Golden Age of the American Racing Car,* 208-210; Tom Ceretto, "Unlikely Hero," *Indy Car & Championship Racing,* November 1998, 78; Taylor, *Indy;* Reed, *Indy* 20.

tetraethyl lead. In 1925, Ethyl ceased production for American consumption, and at about that time, Surgeon General Hugh S. Cumming formed a seven-member committee of scientists and physicians to conduct a study to determine whether leaded fuel, was, in fact, a danger to the general public.[17]

There was a safe alternative. Since the first days of the automobile, engineers had success using alcohol fuel. Ethyl (drinking) alcohol (ethanol) derived from corn or other agricultural sources provided higher octane. It was better suited for higher compression ratios, safer due to its lower-burning temperature, and it could be extinguished with water. Moreover, alcohol fuels were cleaner-burning and reduced engine deposits. Henry Ford was a long-time advocate of ethanol, and he designed the Model T with an adjustable carburetor to run on ethanol, gasoline, or a blend of the two fuels.[18]

The strong Progressive-era temperance movement in the United States was absent in Germany, Italy, and Brazil. These nations experimented with, and more widely promoted, alcohol-based fuels in commercial vehicles during the early days of the automobile. Once the federal government lifted a federal tax on denatured alcohol beginning in 1907, the smaller, yet budding alcohol fuel industry failed to produce at the same capacity as the major oil companies, and before World War I, ethanol fuel remained much more expensive than petroleum. The domestic production of ethanol picked up significantly for use in military machines during United States' involvement in World War I, but Prohibition established by the Eighteenth

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[17] "Ethyl Gas Result of Long Research," *Washington Post,* 3 June 1923; "Autoists' Interest aroused by Ethyl Standard Gasoline," *Washington Post,* 6 April 1924; "Bar Ethyl Gasoline as 5th Victim Dies," *New York Times,* 31 October 1924; Yandell Henderson, "Health Hazards in Automobile Gas," *New York Times,* 3 March 1924; "To End Sale Today of Leaded Gasoline," *New York Times,* 5 May 1925; "Shift Ethyl Inquiry to Surgeon General," *New York Times,* 21 May 1925.

[18] "Alcohol as a Fuel for Motors," *The Automobile,* 15 June 1905, 719; "Praises Alcohol As a Motor Fuel," *New York Times,* 24 May 1914.

Amendment ratified in 1919 and put into effect in 1920, stymied the promotion and production of alcohol fuels in the United States. Even in the early days of the automobile, politicians hesitated to support ethyl alcohol because of its "drinkability," and during Prohibition, the subject of "legalized" alcohol became a greater political taboo.[19] Yet, from the beginning cost effectiveness plagued the alcohol-as-fuel industry. In the early 1900s, oil was cheap and plentiful and widely available in American oilfields. [20]

In addition to social and political hurdles, economic and engineering drawbacks impeded the use of fuel ethanol in America. Ethanol needed to be denatured to prevent the fuel being produced for "booze." Unlike gasoline, ethyl alcohol presented an engine ignition problem in cold weather, but engineers remedied this problem with fuel additives or by adding a small alternate gasoline fuel tank to aid start-up. These issues prevented a massive shift to ethanol-powered engines in the United States.

Although ethanol faced an uphill road in the United States, it had another viable potential beyond a fuel. Engineers discovered that they could use ethanol as a gasoline additive much like lead, to control knock and boost octane. Automobiles could operate with a percentage of ethanol (in between 10 and 15 percent) without engine damage. Nevertheless, ethanol as an additive also had liabilities. For instance, critics argued that ethanol's cleaner-burning properties could have negative side effects. Alcohol's solvent action can loosen engine deposits and create clogs within fuel lines, and unlike gasoline, (or more specifically lead-enriched gasoline), it lacked lubrication properties; ethanol's use over time could wear away engine components. Opponents of alcohol also stressed that although alcohol mixed easily with gasoline, miniscule amounts of

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[19] "Tracey Makes Test Run," *Washington Post*, 1 January 1907, 8.

[20] "Alcohol as a Fuel for Motors," *The Automobile*, 15 June 1905, 719; Hal Bernton, "The Godfather of Gasohol is . . . Henry Ford!" *Washington Post*, 5 August 1979; August W. Giebelhaus, "Farming for Fuel," The Alcohol Motor Fuel Movement of the 1930s," *Agricultural History* 54 (January 1980): 173-184.

water will cause the two substances to break apart (phase separation). They argued that the addition of alcohol, unlike lead, required the addition of a stabilizer or binder (a substance to prevent alcohol from separating with the petroleum (sort of like oil and vinegar). This cost money and added an extra (third) step to the fuel blending process. Tetraethyl lead, meanwhile, was inexpensive and mixed easily with petroleum; a few grams per gallon of gasoline provided better engine performance and gas mileage.[21]

The Ethyl Corporation and the petroleum industry, aware that the addition of alcohol significantly reduced knock, stressed ethanol's limitations and convinced the public and federal government that tetraethyl lead best reduced the problem. If ethanol replaced lead and the Ethyl Corporation dissolved, the petroleum industry also had much to lose. A fuel blend containing ten-percent ethanol meant a ten-percent reduction of gasoline *consumption*, and therefore, less profit.

With lead's technological benefits secured—for the time being—the industry now faced the task of proving its safety. The lead industry mounted a well-executed campaign to save its toxic technology, and as historians such as Christian Warren and Bill Kovarik have pointed out, orchestrated an elaborate campaign to debunk the health effects of exposure to tetraethyl lead. Lead's health hazards had been realized for centuries, but the industry persistently claimed that the amount of lead produced by automotive exhaust was significantly lower than natural levels found in the human body. Corporate representatives and industrial scientists acknowledged the hazards of the mishandling of lead in the production facilities but claimed that worker negligence was to blame. The Ethyl Corporation, aided by occupational science at its disposal, dismissed

[21] For instance see, Hal Bernton, William Kovarik, and Scott Sklar, *The Forbidden Fuel: Power Alcohol in the Twentieth Century* (New York: Boyd Griffin, 1982).

charges that the lead-borne automotive exhaust posed a serious threat to the public and stressed that the fuel diluted in gasoline tanks did not pose a health threat.[22]

As countless newspaper and other sources have pointed out, much of the scientific and academic community dismissed the lead industry's claims, despite pleas from prominent university scientists, including Yandell Henderson (Yale) and Alice Hamilton (Harvard), who publicly stated that lead in the air would pose a public threat. Their concerns were widely circulated in the media and both spoke to the surgeon general's committee. [23] Henderson also stressed the danger of working on automobiles powered by lead fuel in garages, and his ominous claims were echoed in a 1925 *New York Times* article:

> The public is not in great danger of the acute poisoning which caused several deaths and many cases of insanity recently . . . but the breathing day by day of fine lead dust from automobiles using the leaded gasoline will produce chronic lead poisoning on a large scale in the populations of cities.[24]

The surgeon general's committee conducted "only a very limited study" and although noting the increased levels of lead in gasoline service station attendants, concluded, as Warren states in his comprehensive study, *Brush with Death: A Comprehensive Study of Lead Poisoning in America*, that "the correlation between leaded gasoline and increased lead absorption was therefore not strong enough to warrant a prohibition of lead production and distribution."[25] Essentially, the committee took the industrial side of the matter and the lead stayed. As Warren mentions, "through the 1960s, the lead industry employed arsenals of medical experts, academic

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[22] For an overview on the American lead industry see Warren Christian, *Brush With Death: A Social History of Lead Poisoning* (Baltimore: Johns Hopkins University Press, 2000). William Kovarik, "Ethyl-Leaded Gasoline: How a Classic Occupational Disease Became an International Public Health Disaster," *International Journal of Occupational and Environmental Health*, 11, no.4 (2005): 384-397.

[23]Warren, *Brush with Death;* Kovarik, "Ethyl-Leaded Gasoline."

[24] "Sees Deadly Gas a Peril in Streets," *New York Times*, 22 April 1925.

[25] Warren, *Brush with Death*, 127.

affiliations, and scientific know-how to convince any potential regulators that they better than anyone could protect the public's health."[26] Economics and convenience outweighed performance and safety.

Automotive technological innovation often was first developed in motorsports and then passed down to the domestic auto industry (i. e. rear-view mirror, tire compounds). In lead's case, the "secret sauce" was developed in auto industry-funded laboratories and once its octane-boosting properties were realized, auto executives promoted the additive through motorsports. Thus, a major, but unheralded side of the tetraethyl lead saga was that motorsports, in at least some capacity, served to promote lead. After tetraethyl lead quickly found its way into automobile racing, the growing sport certainly did its part to showcase the substance's performance-boosting benefits. The transmission of tetraethyl lead from a Dayton laboratory to the Indianapolis Motor Speedway was an example of "reverse technology."[27]

This was ironic, because on the other hand, and at the same time, the racetrack served as an unutilized laboratory as far as fuel science was concerned; automobile racing engines in Europe and the United States were ahead of the commercial automobile industry in terms of testing and using forms of alcohol as effective anti-knock, performance-enhancing additives at the track. Motorsports was not as committed to gasoline, and "doping" fuel was standard. Racecar engines, in addition to ethanol, used other fuel sources and additives such as benzol. As was the case in the laboratories, in racing's early days, engineers and inventors tinkered with mixtures to reduce the knock problem, and study of fuel additives developed into a science in motorsports.

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[26] Warren, *Brush with Death*, 116.

[27] "Consider Rule Changes for Indianapolis Race," *Automotive Industries*, 22 July 1933, 109; "Gasoline to be Limited in Next 500 Mile Race," *Automotive Industries*, 2 September 1933, 291; "Compression Ratio Up in Stock Cars," *New York Times*, 11 November 1936. Leon Duray's racecar, which qualified third for the 1927 Indianapolis 500 was possibly powered by ethanol.

Racers and mechanics were amateur chemists lacking the tools and facilities of a funded scientific laboratory, and once lead was available, it is likely that while race teams used the substance for both its anti-knock and lubrication qualities, mechanics and drivers also experimented with other anti-knock, performance-boosting additives (alcohol or otherwise).[28]

Because the engines of purpose-built championship racecars were quite different than the commercial automobile, and because speed secrets were kept under wraps, fuel performance tests for the benefit of competitive motorsports, translated little to domestic autos. Since the very first race, racers have always sought any type of an edge, whether as a fraction of a mile-per-hour, longer-lasting engine protection, or a thousandth of a second quicker lap time, and as participants adopted the additive, their racecar emissions spread lead's toxic consequences. This technology had long-term ramifications. Although much of the airborne lead pollution stemmed from millions of American automobiles burning the substance on an everyday basis, drivers, mechanics, and spectators were likely and mostly unknowingly, exposed to ultra-high amounts of lead through their involvement in automobile racing.[29]

Ethanol never went away, and a brief synopsis of the fuel's story in the 1920s and 30s is necessary here to set the stage for the fuel's link with racing in the future. Primarily due to Prohibition and the widespread implementation of lead into the American automobile infrastructure, ethanol as both a primary fuel and gasoline additive remained out of the picture from 1920 through the early 1930s. However, unlike the general American economy, which was robust in the 1920s, the agriculture sector struggled in the 1920s. The production of alcohol fuel

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[28] Benzol or benzene is a crude petroleum by-product. Taylor, *Indy*; "A Substitute for Gasoline Described," *New York Times*, 5 October 1913; David Gregg, "Superchargers Increase Power of Smaller Engine," *Washington Post*, 17 August 1924; "Imports Own Fuel for Auto Classic," *Washington Post*, 7 May 1923.

[29] "Concerning Motors and Motor Men," *New York Times*, 21 May 1933; "Ethyl Gasoline in Britain," *Wall Street Journal*, 28 December 1927; Indianapolis Race Fuel Allowance Cut," *Automotive Industries*, 18 August 1934, 185; "Consider Rule Changes for Indianapolis Race."

was a potential means of profiting off the land. Once the Twenty-First amendment repealed Prohibition, ethanol production picked up significantly in the Midwest, and ethyl alcohol more commonly replaced lead as a performance-enhancing, octane booster in that region.[30]

In addition to agricultural economics, science also forged the rebirth of ethanol in the 1930s. Chemurgic science, devoted to the panacean idea that domestic agriculture could provide all of the needed resources for developing technology and industry, was popular during the 1930s. The chemurgy movement's roots dated back to World War I; the United States and other nations dealt with petroleum-supply problems by finding additional uses for agriculture, and, as historian Randal Beeman notes, "the industrial use of crops and crop wastes crystallized as a concept during and after the so-called chemist's war of 1914-1918, when the vulnerability of certain American supplies of raw materials became evident to industrialists, politicians, and the general public."[31] In essence this was almost a pre-green consciousness. Beeman continues, "another ideology of chemurgy was influenced by then-contemporary notions of conservation and ecology. After World War I, proponents of chemurgy challenged their test tube alchemy held out the chance for national self-sufficiency in both common and rare raw materials."[32]

The development of a Midwestern-based ethanol industry to bring alcohol-enriched gasoline into the general marketplace in the late 1930s was both a visible yet disappointing result of the chemurgy movement. Sold under the brand name of Agrol, ethanol-enriched gasoline peaked in 1938 when it was sold at over 2,000 Midwestern service stations. However, this effort

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[30] "Predicts Motor Fuel from Sawdust," *New York Times*, 25 February 1917; Jane Seaberry, "Gasohol," *Washington Post*, 26 August 1979; Hal Bernton, William Kovarik, and Scott Sklar, *The Forbidden Fuel: Power Alcohol in the Twentieth Century* (New York: Boyd Griffin, 1982).

[31] Randal Beeman, "'Chemivisions': The Forgotten Promises of the Chemurgy Movement," *Agricultural History* 68 (Autumn 1994), 23-45, quote on 25.

[32] Beeman, "Chemivisions," 35.

failed due to a lack of capital and, as was the case before World War I, petroleum remained much cheaper than ethanol in than ethanol. Moreover, monopolistic practices between the oil industry—which charged wholesalers more for raw petroleum if they marketed Agrol—hurt the Kansas-based corporation. Then the onset of World War II and resulting stabilized petroleum and agricultural prices in the 1950s put ethanol (temporarily) back into remission as an American fuel source for commercial automobiles. [33]

Perhaps of all the entities, the AAA-sanctioned championship division adapted best to the depression. For the 1931 season, the AAA and IMCA worked out an agreement to permit interchange, and drivers could race in both organizations without penalty. This was partially a response to the depression for it increased car counts in both entities. Many of the specialized racing companies went bankrupt by the early 1930s. AAA rulemakers mandated that championship racecars take a technological step backward to closer resembling a stock car. Commonly known as the "junk formula," the new rules allowed major domestic American manufacturers back into championship racing. These "mutants" were a combination of Detroit body styles, Los Angeles speed, and Akron tire rubber and provided some of the most thrilling and closest finishes at Indianapolis Speedway.[34]

As the board era concluded, and the depression set in, the AAA greatly reduced its championship series schedule, and, with the major exception of Indianapolis, returned to dirt

[33] David E. Wright, "Alcohol Wrecks a Marriage: the Farm Chemurgic Movement and the USDA in the Alcohol Fuels Campaign in the Spring of 1933," *Agricultural History* 67 (Winter 1993): 36-66; Beeman, "Chemvisions," 25.

[34] Big cars were also called championship cars and speedway cars during the 1930s. Taylor, *Indy:* 81; T.E. Myers, "'Pop' Myers Discusses the '500,'" *Illustrated Speedway News*, February 1932, 23; "Better Times Ahead for 1931," *Illustrated Speedway News*, February 1932, 23, 34; "Indianapolis Expects Largest Entry List in History, May 30," *Illustrated Speedway News*, April 1932, 24.

facilities. That type of surface remained most popular throughout America. [35] As an *Illustrated Speedway News* editorial explained:

> Just what new developments there will be in 1932 with regard to new speedways, is extremely difficult to forecast, but one thing is certain—that us the amusement business has been the one to suffer the least in this tauted [sic] depression, and with the refection in the cost of materials, availability of more and better racing talent, and the present low cost of real estate, it isn't going to be long before someone realizes that a speedway can be made to operate as a paying proposition.[36]

Although few major speedways went under construction, the building of many short-lived dirt facilities accommodated motorsports in the depression. These tracks put people to work and provided a cheap source of amusement from the tedious stress of a country in depression. Plus, racetrack dirt was not only cheap or free, but inexpensive to maintain.[37]

During this period, the green flag first waved at famous Midwestern facilities, such as Belleville, (Kansas); and Knoxville, (Iowa). State fair auto racing in Minnesota, Illinois, and Missouri also became yearly institutions. During the 1930s, the establishment of AAA-sanctioned regional circuits kept drivers near their homes; Midwestern racers stayed in the Heartland and western drivers stayed on the coast. Few outlaws and championship drivers truly barnstormed the nation. Because it was expensive and time-consuming to haul racecars and teams across the county, especially during the depression, only the Indianapolis 500 brought the most talented (and best funded) drivers and teams from both coasts of the United States to the same track at the same time.[38]

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[35] There were only three championship races in 1938 and 39; Harry D. Riggins, "Increase Noted in Fair Attendance; Hankinson Predicts Better 1932," *Illustrated Speedway News,* February 1932, 20; "Three 'A', I.M.C.A. Agreement Terminated," *Illustrated Speedway News,* February 1932, 20; Skinner, "Breaking into Dirt Track Racing."

[36] Ted Allen, "Contest Board Secretary Says," *Illustrated Speedway News,* January 1932, 30.

[37] "Dirt Track Competition," *Illustrated Speedway News,* January 1932, 13.

[38] Granville "Buster" Warke, interview by author, 23 August 2007, Allentown, Pennsylvania, in possession of author. Russ Catlin, *The Life of Ted Horn: American Racing Champion* (Los Angeles: Floyd Clymer, 1949), 21-38; Radbruch, *a History of Dirt Track Auto Racing.*

In the 1930s, the AAA's stranglehold over American motorsports was more limited. This was, in part, because the IMCA and local promoters controlled most fairground racing, and nationwide, additional small entities and clubs continued to form during the depression. This power struggle between the AAA, promoters, drivers, and other sanctioning bodies grew more strained over time (which was why the interchange program only lasted one season). The AAA Contest Board remained most selective in its choice of "legitimate" venues, and, with the exception of Indianapolis, all championship races from 1935 to 1942 occurred on dirt. Although just a few American markets were "blessed" with an AAA championship sanction, there was plenty of other motorsports, AAA, IMCA, CSRA, or otherwise. Upstart racers formed local groups or were encouraged by promoters to compete with larger entities, such as the IMCA or CSRA, when those series staged races in their areas.

America's racing development became more complex during the depression, and although distinct regional preferences began to develop, a growing differentiation of racecars and the development of new varieties of racing best characterized the years leading up to World War II. As was the case in general American way-of-life, Depression-era motorsports was marked by survival, adaptation, and experimentation. In the American household or on the American farm, the depression stimulated creativity, and innovative racecar drivers optimized whatever resources they had in the garage.

Racecars became more specialized and distinguishable during the depression, and as open-wheel racing (commonly referred to as "big cars" or "speedway cars" during this period) sanctioned by groups such as the AAA, IMCA, and CSRA, subsisted during the 1930s, additional forms of motorsport gained prominence across the country. A revitalized interest in stock car racing unfolded throughout America, and midget racing began in California and swept

eastward. In the 1930s, these forms of American motorsports gained popularity at agricultural exhibitions.[39]

In comparison with open-wheel racing, stock car racing was inexpensive and became a preferred form of racing for amateurs. Working on a passenger car in the barn or garage on evenings and weekends after daily work and chores were completed, or "tinkering," played a major role in the growth of stock car racing nationwide during this time. It is important to point out that most stock car races after World War I were often unsanctioned and contested at fairs. Stock car races between local competitors sometimes supported AAA championship events or IMCA big car races.

Well before Atlanta, Charlotte, or any part of the southern backwoods, Los Angeles was on the national stock-car racing stage. In 1934, there was a major 200-mile stock car race between AAA championship series and other western-based drivers at Mines Field. That April, Legion Ascot Speedway and the surrounding area hosted a unique stock-car event that combined the five-eighths dirt oval with a street circuit marked out in the hilly outskirts of the city. Later that year, the stockers headed north and ran a 250-mile race on Oakland's one-mile dirt oval.[40]

On the other side of the United States, stock car racing became more popular in the Southeast in the late 1930s. In 1936, Daytona Beach hosted an AAA-sanctioned stock car race, and the city officially made the transition from a speed-record center to a stock-car-racing hub. Because there was no major stock-car entity at the time, open-wheel drivers dominated the field. The racetrack was part sand and part black-top, and the wide shoreline offered spectators fine

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[39] Usually the term "speedway cars" was reserved for AAA championship racing. The name big cars came about to distinguish these older racecars from the midgets that came on the scene in the 1930s.

[40] Spencer L. Riggs, "Louie Meyer: Baron of the Brickyard," *Automobile Quarterly* 33 (July 1994): 71; "Midget Auto Races Furnish Lots of Thrills at Loyola Dirt Track," *Coast Racing News*, 1 March 1934, 5; Ted Allen, "Contest Board Secretary Says," *Illustrated Speedway News*, January 1932, 30. "Meyer Wins Auto Race," *New York Times*, 7 May 1934; Don Radbruch, "The Forgotten 500s," *Open Wheel*, January 1998, 62-67.

beachside views along the 3.2-mile course. From a competition standpoint, the inaugural race was a mess and the race was cancelled at approximately the 200-mile mark. The straightaways did not pose a problem, but on the turns, the sand softened and stirred up to the point that cars got stuck and some had to be towed out of the sandtraps. For the time being, stock car racing on the beach did not work. In the following years, the sandy turns were covered with marlstone which helped fix the problem.[41]

The proliferation of stock car racing further accelerated interest in motorsports in the Southeast, although the previous success of open-cockpit (big car) events in cities such as Savannah, Charlotte, and Miami proved that early automobile racing popularity in the South had little to do with the question of how "stock" the vehicles were. Shreveport, Louisiana, was an IMCA stronghold. The site of the state fair, this one-mile track served as a major big-car, dirt track racing venue in the Deep South for decades. The 1930s were the heyday of open-wheel racing at southern state fairs in places such as Tampa, Florida; Birmingham, Alabama; and Nashville, Tennessee. The spread of IMCA-sanctioned fair racing throughout the South mirrored the development of IMCA racing in the mid-1910s in the Midwest, in that for many Southerners, this was the first time they had the opportunity to see nationally known stars.[42]

Without question, stock car events were scattered across the country during the Depression. However, as this form of racing picked-up in popularity throughout America, some parts of the South, especially the states of Virginia, North and South Carolina, Georgia,

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[41] Webster's dictionary defined marlstone as "a rock that consists of a mixture of clay materials and calcium carbonate." White, *Lost Racetracks,* 25.

[42] In 1936, the track was shortened to a half mile. Throughout racing history there never was a solid South. Three "cotton" states, Mississippi, Arkansas, and Louisiana, embraced open-wheel racing, and better grouped with the Midwest instead of the Southeast and these preferences began to take shape in the 1930s. Randal L. Hall, "Carnival of Speed: The Auto Racing Business in the Emerging South, 1930-1950," North Carolina Historical Review 84 no. 3 (2007): 245-275."

Alabama, and Florida, began to embrace this form of American motorsport in the years leading up to World War II. To be sure, clues explaining the future success of NASCAR can be found in the late 1930s. Stock car racing in the South has deep fairground roots, and these roots spread after World War II. Although stock car racing was gaining a following in southern markets, by 1940, the three subdivisions of stock car racing (pure stock, modifieds, and jalopies) all gained national popularity. The Southeast lagged the rest of the nation in terms of professional competition during this time; that part of the country had the fewest superspeedways, and the AAA sanctioned a small number of races in the South. The South, however, did see a growing number of unsanctioned races. Many were of the stock-car variety, and impromptu contests sometimes took place not on formal racetracks, but on farms and pastures.[43]

During the 1930s, stock car racing was common at fairs and so was midget racing. The first "official" race was on June 4, 1933, and the development of midget racing increased grassroots participation in the sport during the depression. Initially developed in California, these small racecars rapidly spread eastward, finding suitable homes on fairground tracks. Track lengths were often reduced to a quarter- or fifth-mile to accommodate the tiny speedsters.[44]

Midget racing emerged almost simultaneously in the southern part of the state in Los Angeles and San Diego and in the center of California in Oakland and San Jose. Tracks in these two regions were constructed, or existing tracks were shortened, to accommodate midget racing. Built in 1934, Gilmore Stadium—also intended for football—became the "Legion Ascot" of midget racing, and the Los Angeles track became the western capital of that form of motorsport.

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[43] Hall, "Carnival of Speed."

[44] Fox, *The Mighty Midgets.*

Part of the reason auto racing thrived in California during the depression was because it was home of the motion picture industry. Without a doubt, racecars have always found a home in Hollywood circles.[45]

The eastward spread of midget racing was swift. The first races in the Midwest and Northeast were held in 1934 in Brookfield, Wisconsin, and Irvington, New Jersey, respectively. The first Wisconsin race took place on a converted dog-racing track and the Irvington race was held in the middle of an amusement park. This form of motorsport reflected the depression in that places assumed multiple uses and midget racing found a home at several American amusement parks and dog tracks. Amusement Parks also hosted Lakeside Speedway in Denver, Colorado, and Mahoning Valley Speedway in Pennsylvania. Seattle's Playland Park was a dog track converted for midget use.[46]

Indoor races started in 1935, and winter races became common. Because the tracks were so short, little portable lighting was needed, and midget auto racing became predominately an evening sport. Urban stadiums and arenas were converted into auto racing venues to facilitate auto racing in the city. A temporary, quarter-mile, 30-degree-banked board track occupied Chicago's Soldier Field in 1939, and midgets raced at New York's Polo Grounds and the Los Angeles Coliseum. Indoor arenas, such as the Boston Garden, also accommodated racing.[47]

The depression indirectly kicked off a new motorsports boom. Some tracks such as Hershey Park (Pennsylvania) and the Akron Rubber Bowl (Ohio) were built as part of New Deal-era Works Progress Administration (WPA) projects. Midget ticket prices were low, and

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[45] "Midget Auto Races Furnish Lots of Thrills at Loyola Dirt Track," *Coast Racing News*, 1 March 1934, 5.

[46] James Liska, "The Badger Midget Auto Racing Association," *Open Wheel*, August 1982, 68-71, 83.

[47] Walt Woestman, "Birth of the Midgets," *Speed Age*, July 1947, 4-5, 27; Terry Reed, "A 1939 World's Champion?" *Open Wheel*, October 1999, 28-30; "Midgets Race on Soldiers' Field Tonight," *Chicago Daily Tribune*, 18 June 1939; Edward Prell, "Mile a Minute Clip Gives Hanks Midget Feature," *Chicago Daily Tribune*, 19 June 1939.

races were just as cheap as, or cheaper to attend, than movies. Not only were the midget racecars more affordable and safer (slower) than the "big cars," but races could now take place almost anywhere at anytime. Chris Economaki, editor of *National Speed Sport News* since 1950, covered racing on ABC television from 1960 to1980 and was a correspondent on CBS from 1980 through the early 1990s. Economaki grew up in the middle of the booming New Jersey midget scene during the 1930s. He comments:

> Up until the time the midget racecar appeared, an auto race was held at a track, half-mile or larger, out someplace. That involved the man of the house having to get permission from his wife, or take the family; planning and so forth. . . . Then when the midget cars came, all they needed was a quarter-mile track. So every sports arena, athletic field, high school football field, et cetera, had the potential for becoming a midget racetrack, and many did. What the midget racing movement did, which benefited all other racing, it brought racing to the people. The people had to go find the races before. Now, a man could go to work, come home on Friday, have dinner at home, go downtown and watch the midgets and come back at home at a reasonable hour, and that was a tremendous boom for the sport.[48]

Promoters brought midget racing to the fans, and spectators no longer had to travel to the yearly fair nor wait for the weekend to watch automobile races. Midget racing often took place on weeknights. The midgets also brought American motorsports back into an urban setting until the 1960s, when the midgets gradually joined other types of motorsports in the countryside.[49]

During the depression, two other forms of motorsport grew in a regional sense. Sports car or "road racing" developed in the Northeast, and drag racing developed in California. Since the last major championship street-circuit events of the 1910s, European influence on American motorsports waned, and America followed a distinct oval-track racing development. Because of

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[48] Chris Economaki, interview by author, 22 August 2007, Midland Park, New Jersey, in possession of author.

[49] Fox, *The Illustrated History of Sprint Car Racing*," 59-60. Dustin W. Frazer, "The Roar of the Mighty Midgets, Part I," *Stock Car Racing*, October 1969, 16-17; Chris Economaki, "New York City's Missing Tracks," *National Speed Sport News*, 30 August 2006, 4; White, *Lost Racetracks*, 23; Don Radbruch, "Playland-Aurora Speedway," copy, in author's possession.

the popularity of oval racing, and a lack of permanent, closed-circuit, European-style, road courses after World War I and through the 1920s, that variety of racing was limited in this country. In the early 1930s, sports car racing was rejuvenated in America by a group of New York-based gentlemen, who, in 1933, formed the American Racing Car Association (ARCA) as an amateur club. The European connection returned somewhat, and the Northeast and Mid-Atlantic states, more than any other part of America, developed a road racing following. Because Grand Prix-style racing disappeared from the AAA circuit after World War I, road racing's growth in the late 1930s brought America back in contact with European drivers and Italian, French, German, and English sports cars.[50]

Adding to the growing interest of sports car racing during the depression was a revitalization generated through the Vanderbilt Cups held on Long Island in 1936 and 1937. For the time being, races were again held on public rural roads, and most of the races took place in New England and the Middle Atlantic states—regions most closely connected to European sporting interests—but a couple took place as far away as Memphis, Tennessee. The Vanderbilt Cup occurred on private property; the 16-turn-course was unique in the fact that spectators could view the entire race from their vantage point, thus eliminating one the major spectator drawbacks of non-oval competition. This type of racing also had aesthetic appeal—most of the courses carved through the picturesque New England countryside. The races were more about gentlemanly bragging rights, and the taking in of scenery, than intense competition.[51]

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[50] In the 1930s, road racing became somewhat synonymous with sports car racing. Howard Harrison, "America's First Sports Car Race, *Speed Age*, November 1957, 32-33, 71; "Santa Monica Wants Grand Prix and Vanderbilt," *The Automobile*, 17 February 1916, 344. *The Automobile Racing Club of America Official Program, Briarcliff, N. Y.* 23 June 1935; Jeff Allison, "The Automobile Racing Club of America," *Vintage Motorsport*, March/April 1992, 44-8.

[51] A. E. Kessler, "Noted Race Revived," *New York Times*, 11 October 1936; *ARCA Annual*, 1939, 3, 17.

In a similar vein as the Ormond/Daytona Beach contests earlier in the century, the popularity of point-A-to-point-B racing escalated during the 1930s. Daytona remained the American hub of official land-speed record attempts throughout the 1920s and 30s. However, the northeast Florida beach, once considered the fastest surface and most ideal venue available for high speeds, was no match for the environmental and ecological benefits presented by the Bonneville Salt Flats in the northwestern Utah desert, where racing began in the 1910s.[52]

At one time a prehistoric lake, the salt granules at Bonneville provided the fastest and one of the flattest spots on the planet. (Racers have reported being able to see the curve of the earth on the horizon!) The salts could be deceptive—mud sometimes oozed up in sections creating possible hazards—still the surface was safer than sand or pavement, especially if a car lost control. The occasional desert rains constantly replenished the 15-mile straightaway with a surface of smooth granules. Despite the efforts of local boosters to stop them, speed demons, preferring a smoother surface and more space, left Florida for Utah, and land-speed racing permanently relocated to the West.[53]

In February 1935, Sir Malcolm Campbell set a land-speed record at Daytona in his Blue Bird of 276.82 miles-per-hour. In September, later that year in Utah, he set an unofficial speed of 301.13 miles-per-hour with the same car. Campbell, by moving his world-record attempts to Utah, marked the end of one era and the beginning of another. The *Blue Bird* likely underwent

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[52] George Eyston and W. F. Bradley, *Speed on Salt: A History of the Bonneville Salt Flats, Utah, U. S. A.* (London: Batsford, 1936; Frank L. Huffaker, "Daytona Beach: Speed Center of the Universe," *Illustrated Speedway News,* February 1932, 10; Post, *High Performance.*

[53] "Safer on the Salt," *Hot Rod,* May 1950, 9-10; John Bartlett and Mark Rene, "More Speed on Salt!" *Speed Age,* December 1950, 26-7. "Utah Salt Flats: Once Explorers Death Trap," *Illustrated Speedway News,* 9 November 1954, 8; Gordon White, interview by author, Deltaville, Virginia, 1 November 2007, in author's possession.

technical changes during the period in between records, but the salts proved that the hard and fast Daytona sand was not as ideal.[54]

Although straight-line racing retained its appeal as a race for top speeds against the clock, hot rodding gained greater popularity when it was featured as a duel or "drag race." The head-to-head and standing-start features added additional driving skill to straightaway racing because reaction time became critical. California took the lead in the type of motorsport that became known as drag racing. This variety of autosport slowly became more organized at the regional level. The largest organization for the straight-liners was the Southern California Timing Association (SCTA); the Russetta Timing Association (RTA) was a smaller entity.[55]

Southern California was a booming metropolis with a budding car culture, and the availability of dry lake beds to the east of Los Angeles allowed for the pre-World War II development of "legal" drag racing. When they were not racing on the streets, this was where speed seekers from Los Angeles and Southern California legally tested their tinkered automobiles. On the Bonneville Salt Flats and California Dry Lakes nature, not tourism, amenities, and spectator appeal, nurtured a particular type of motorsport.[56]

As these opening chapters have shown, the state of California, even more than the heavily populated Northeast, played the lead in many regional and national developments in American sports, even as speedway closures were common. The first American speedways to be bulldozed tended to be those located in the Los Angeles area. California's enviro-motorsports connection

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[54] The early dragsters were often called roadsters during this era, not to be confused with a different type of roadster racing which became popular after World War II.

[55] David Freiburger, "Wally," *Hot Rod,* February 2008, 56-64; Moorhouse, *Driving Ambitions;* Post, *High Performance.*

[56] Muroc Dry Lake Races Give Cars Chance for Speed," *Automotive Industries,* 1 March 1934, 2; "DeSoto Sets 32 A.A.A. Records on Muroc Lake," *Automotive Industries,* 21 July 1934, 64; Moorhouse, *Driving Ambitions.*

in the 1920s and 30s foreshadowed the future of American auto racing. Although movie stars and racecars have always mixed well, in the longer-term, the motion picture industry still had an adverse effect on Los Angles tracks. Take the Los Angeles Speedway mentioned in the beginning of the chapter. It was built in Beverly Hills—a tiny neighborhood with a 1920 population of 674. The land changed hands only four years later, reportedly at ten times the value, and the wooden speedway was dismantled after its final race in February 1924. By 1930, the small city had a population of nearly 17,000 permanent residents, many fanning out from Los Angeles's movie studios. Legion Ascot drew crowds of over 10,000 in the 1930s, but by 1936, real estate became too valuable and the legendary facility held its last race. The track succumbed to sprawl, and because of continuing noise complaints, the surrounding community pushed not for the preservation of the track, but for the demolition of the facility. Once used for stock car and championship car racing, Mines Field went from tiny dirt runways in the late 1920s to eventually become Los Angeles International Airport in 1949. By 1937, only two tracks, Gilmore and Atlantic, remained in the city. Indeed, California's pre-World War II auto racing development in the 1930s provided environmental foreshadowing.[57]

Since the turn of the century, if tracks wound up too close to development they were simply built somewhere else nearby. In the early days of motorsport there was little environmental or ecological concern when it came to building of a racetrack. America's lust for motorsport either adapted to or controlled the environment. Superspeedways were built close to large cities, and fairground facilities were located near or within small to medium-sized cities. Midget races

[57] Brock Yates, *Hot Rod: Resurrection of a Legend* (St Paul, Minn.: MBI, 2003), 39; Harold Osmer, "Los Angeles Speedway," *Speedway Illustrated*, April 2007, 86-87; "Plan to Legalize Bets on West Coast Racing," *Illustrated Speedway News*, April 1932, 21; "New Race Mark Made for 12 Cu. In. Cars," *Automotive Industries*, 23 February 1923, 541; Catlin, *The Life of Ted Horn.*

brought motorsports back into an urban setting on existing facilities, such as amusement parks and football fields. Although the big boom in American suburbanization did not occur until after World War II, sprawl had an impact on motorsports since the earliest races. After 1945, the geographic picture of American motorsports would be more sharply outlined by distinct regional developments, and how auto racing sustained, survived, and/or thrived remained, in countless cases, contingent on environmental factors.

CHAPTER 4
IF YOU BUILD IT, THEY WILL RACE (1945-1955)

Every little town had a racetrack back then.

—*Gordon Woolley*[1]

You have to learn the different dirts in different parts of the country.

—*Brian Birkhofer*[2]

And a lot of times when I first started racing, the car that we started racing with wouldn't be licensed. And we would take the windshield out, take the headlights out, gut it, and drive it to and from the racetrack. If we wrecked it then we had to leave it there and find some way to go get it and haul it home.

—*Jim Cadwell*[3]

In 1942, the Office of Defense Transportation banned auto racing to conserve rubber, fuel, and metal—the raw materials of technology. After World War II, "the public was race starved,"[4] and auto racing participation increased. Americans pursued recreational activities and hobbies more than before, and people had money to spend—the robust post-war economy of the early 1950s mirrored the early 1920s. More Americans bought racecars and spent their leisure dollars to attend races. According to a 1952 *Wall Street Journal* article, for the 1951 season, 35 million fans, half of them female, paid a record 65 million dollars to attend races. The sport appealed across demographic lines; teenagers preferred stock races, while adult spectators favored championship racing.[5]

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[1] Gordon Woolley, interview by author, 1 June 2007, Knoxville, Iowa, in possession of author.

[2] Dan Anderson, "Tacky is Good," *Speedway Illustrated*, October 2005, 67-69, (quote on 68).

[3] Cadwell served as an IMCA "field-filler" in the early 1950s. Jim Cadwell, interview by author, 15 December 2006, Knoxville, Iowa, in possession of author.

[4] Don Radbruch, telephone interview by author, 19 October 2006.

[5] "Permits Some Auto Racing," *New York Times*, 9 November 1944, 19; "Midget Auto Racing Ban Ends," *New York Times* 9 November 1944, 31; Ray Vicker, "Speed Sport is Roaring into its Biggest Boom," *Wall Street Journal*, 28 April 1952, 1, 4.

In the 1950s, getting involved in motorsports was never more easy, and stories of how racers began varied little from region to region. Young men and women went the local track, liked what saw, and with little money and technical know-how could compete in local races by the next week, and—if they had enough money, mechanical skills, and driving ability—perhaps even be competitive.

Military veterans learned to tinker while serving in motor pools and as aircraft mechanics in the service. After returning home, some missed military action and sought a rush similar to that provided by combat. Motorsports filled this void. This new breed of drivers had the need to produce enormous bursts of adrenaline and to be among a group, or a team, engaged in battle. The local speedway was the battlefield; the stakes were lower, but the sensation of danger and risk was there. "Artillery" was plentiful; a plethora of pre-World War II autos not necessarily desirable for roadways, and a surplus of wartime machinery and leftover automobile parts from the depression, were the "stuff" of many post-World War II racecars.[6]

In addition to the widespread availability of older tracks, an abundance of informal courses, such as airstrips and athletic stadiums, provided more places to race. Some fairground facilities, which before World War II only hosted races once or twice per year, staged weekly events. This contributed to local racing development, and the summer-long availability of a county fair track fostered additional grassroots participation. People had money to spend, and fairs that weathered the war in the red started making profits, due in part to the popularity of auto races.[7]

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[6] Golenbock, *American Zoom;* Richard Andre, "Here and Gone! Midget Car Racing in West Virginia," *Goldenseal* (Fall 1995): 45- 52; Daniel, *Lost Revolutions.*

[7] Auto racing periodicals and local and regional newspapers provide evidence of more races taking place at fair facilities.

If natural conditions were right, one could build a local track for minimal cost and with minimal effort. The facility would require first a few hundred acres; the more open and flat the land meant the less excavation required, and if it happened to present a natural bowl formation it had an especial appeal. A worn-out field leased for a few dollars from a farmer and located in the rural environs where the track proprietor would not have to worry about disturbing neighborhoods with dust and noise made some of the best venues. Throughout the decades, racers undertook their sport surrounded by green-growing cornfields in the Midwest, cotton fields in the South, and grazing cattle in both regions.

In some markets, the construction of new tracks—both dirt and paved—filled an absence of fair tracks. A major boom in short-track (less than one mile) construction materialized after World War II. As a result, the year 1953 marked the all-time peak in the number of American racing facilities. Most post-war tracks existed far outside of city limits and beyond the boundaries of new suburban communities, at least for the time being. In some cases, farmers sold or leased land to track operators and promoters. Privately owned speedways built specifically for weekly dirt track racing often offered better surfaces than state- and municipally operated fairground facilities. Dusty and unkempt fair tracks, originally intended for horse racing, were often no match to better-manicured, purpose-built dirt speedways.[8]

Each track offered a unique composition of dirt, clay, and other materials. This "mixture" determined the condition of the track and how drivers and teams would strategize for a race. In racing's earlier days, soil science meant little more than applying oil or calcium chloride to a track to reduce dust. Track operators who adapted best to climate, precipitation, and

[8] Allan Brown, *The History of America's Speedways: Past and Present* (Comstock Park, Mich.: Slideways, 1994).

changing weather conditions, maintained fast, tacky, and nearly dustless tracks. As pavement racing grew more popular, dirt track racing turned more scientific.[9]

Over the years, motorsports agronomy became more sophisticated, and track operators became soil experts. In some cases, the "art" of dirt-track preparation has come a long way over the decades. Some track owners added organic matter, such as manure and compost to track surfaces. This practice often helps bind soil and retain moisture, thus improving a track's racing surface. Others avoided technical science and paid particularly close attention to the weather and employed good old-fashioned hard work by personally watering and grooming their track accordingly to the seasonal climate. One contemporary track owner who ignored soil chemistry stated, "the real key is when and how you work or water them."[10] To that end, a good surface was sometimes often attributed more to maintenance than soil composition.

At many Midwestern facilities, nevertheless, an indigenous combination of dirt and clay provided optimal track composition. Back in 1916, an *Automobile* article captured the appeal of this Heartland dirt described as "a black gumbo that people of this territory know to be pasty and to pack like glue. . . . There will be no holes dug in it by the tires."[11] This gumbo provided superior tire traction, and the gooey, nutrient-rich, black dirt facilitated passing, particularly in the turns. Some track owners dredged gumbo from Midwestern lakes and rivers.

The 1950s marked the construction of Eldora and Skagit, famous tracks that became scaled-down versions of civic monuments. Their supreme dirt surfaces made them superior racing arenas. Western (Rossburg) Ohio's Eldora Speedway, in Darke County (population 41,799), was built in 1954 on the site of a cornfield that had reportedly produced 125 bushels-an-

[9] Tom Helfrich, telephone interview by author, 24 February 2009, in possession of author.

[10] Carter, "Dirty Work," 70.

[11] "K. C. Speedway Nears Completion," *The Automobile*, 6 July 1916, 43.

acre two years earlier. Initially a quarter-mile, Eldora served as a place where local farmers could race their tinkered racecars. In 1958, the track briefly expanded to three-eighths of a mile, and then in the following year to a half mile, which it remained. According to the United States Natural Resources Conservation Service, Rossburg exists on "prime farmland." Eldora's tacky surface and steep 24-degree-banking—meticulously maintained by long-time track owner Earl Baltes—made Eldora the fastest half-mile dirt track in the country. NASCAR champion Tony Stewart purchased the track in 2004, and it continued to live up to its legacy. Darke County remained a rural outpost, its population climbing to 55,096 in 1980, and falling to 53,309 in 2000, assuring Eldora's security from sprawl.[12]

Skagit Raceway first hosted auto races in 1954. Located in Burlington (about an hour's drive north of Seattle), a famous tulip-producing region, the three-tenths-mile track remained an institution in rural Washington. Skagit is egg-shaped; its surface, partially composed of grey clay common in the region, gets harder and quicker as the clay cools and solidifies during night events. The track capitalized on Northwestern racing hunger and became the most successful motorsports facility in Washington.[13]

Since 1921, the natural surface challenged Northern and Midwestern drivers every winter at Tampa, home of Florida's most famous dirt track, Plant Field at the State Fairgrounds. Unlike the red-clay-rich tracks in neighboring Georgia and Alabama, and hard-packed Daytona Beach, Tampa offered a looser sandy surface, likely existing on "a young marine plain underlain by

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[12] 1950 U.S. census population was 41,799. Lars Anderson, "Dirty Work," *Sports Illustrated*, 102, no. 23 (2005): 75-79; Bill Holder, "The One and Only," *Open Wheel*, October 1982, 68-69, 81-82; Bill Holder, "Unrivaled: Eldora Turns 50!" *Stock Car Racing*, September 2003, 50-52; Doc Lehman, "Eldora Speedway: Earl's Place at 50," *Dirt Late Model*, June 2004, 22-31; John Gibson, "Ten Top Tracks," *Stock Car Racing*, June 2008, 39-42; National Resources Conservation Service, "Prime Farmland List for Ohio," available from http://www.oh.nrcs.usda.gov/technical/soils/prime_R.html, Internet; accessed 27 April 2009.

[13] Andrew Kunas, "Remaking Skagit Speedway," *FlatOut*, June 2005, 70-71; Rob Sneddon, "Silver Lining," *Open Wheel*, October 1997, 60-66.

Tertiary-age rocks, including very fine grained shale, mudstone, and limestone beds. A sandy marine deposit of Pleistocene age occurs at the surface in most of the area."[14] On warm winter days, the track quickly heated up under the strong Florida sun, and became drier, dustier, and slicker throughout the afternoon. National Sprint Car Racing Hall of Famer Jerry "Scratch" Daniels said of Plant Field, "that track, just like down here [Winter Haven, Florida], is kind of sandy. Well, if you drew an early number [qualifying order] you were in good shape to get qualified. But as time went by, and that racetrack got bad [bumps and holes], you were in bad shape because it didn't matter who you were or what car you had, that track was gone [less traction and less speed][15] National Sprint Car Hall of Famer Gordon Woolley, one of many drivers that nearly got killed at Plant Field, simply referred to the track as "treacherous."[16]

Track conditions shifted with the time of day. Sun-baked surfaces turned into dusty, skidding surfaces that required masters of racecar control. Driving on the dirt required skill and adaptation, and each dirt track had its own quirks. Drivers needed to find the fastest part of the track. Sprint Car Hall of Famer Jerry Blundy remembered the now-defunct Pittsfield (Illinois) Speedway. "Well, always in sprint cars the guy that went the best usually was right in the moisture. And the very outside, if there's any moisture, that's where it's at. And you didn't get close to it. You got in it. And you get the right rear in that moisture to do any good."[17] Drivers most familiar with certain tracks tend to have advantage against outsiders. This is one reason

[14]National Resources Conservation Service, "Southern Florida Flatwoods," available from http://www.mo15.nrcs.usda.gov/technical/MLRAs/mlra_155.html, Internet; accessed 27 April 2009.

[15] Jerry "Scratch" Daniels, interview by author, 6 February 2007, Winter Haven, Florida, in possession of author.

[16] Woolley, interview by author.

[17] Jerry Blundy, interview by author, 16 December 2006, Galesburg, Illinois, in possession of author.

why local competitors often fare well against better-funded drivers originating from regional- and national-touring circuits.[18]

Most short tracks constructed during this period featured dirt surfaces, but asphalt racing attracted a larger following. Track owners sometimes paved over dirt; they made the shift in the 1950s, in part, because some critics viewed unpredictable and bumpy dirt as more hazardous to driver safety than smooth pavement. The most noted example was the paving of the Wisconsin State fairgrounds track at Milwaukee, the first state fair facility to convert to asphalt, in 1953. Asphalt, unlike dirt tracks, required little seasonal, weekly, or daily upkeep. "Haphazard" maintenance of a dirt track cost little or nothing, but properly preparing a dirt track was time consuming and expensive.[19] As Chris Economaki points out:

> The maintenance of a dirt track, you had to have a salaried employee on staff to condition the dirt tracks, and you're at the mercy of the weather. If it rained in the morning and the track got muddy, and [it] was a beautiful evening you couldn't race because the track was unraceable. What the asphalt track did was eliminate a salaried employee and kept rain outs from killing some of your races.[20]

In addition to convenience, asphalt was "cleaner" for spectators, a particular appeal. As Economaki comments, "the women loved it; their dresses didn't get spattered with mud." [21] Moreover, asphalt eliminated the age-old annoying problem of dirt getting into the engine and other sensitive racecar components. As the popularity of paved racing heightened; the motorsports' print media revealed a distinct bias for dirt, calling for its preservation and the driving skills it tested. A 1956 *Speed Age* article opined:

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[18] Anderson, "Tacky is Good."

[19] Robert N. Snyder, "The Pattern for Tomorrow's Speedways?" *Speed Age,* February 1948, 8, 19; *Milwaukee Mile Program,* 6 June 1954; Buzz Miller, "Milwaukee 150 to Bettenhausen," *Illustrated Speedway News,* 13 July 1954, 1; Al J Krause, "Speedfest Week-ends at Milwaukee Track," *Illustrated Speedway News,* 3 August 1954, 9; Al Kruse, "Tom Marchese Honored," *Illustrated Speedway News,* 13 October 1959, 9-10.

[20] Economaki, interview by author.

[21] *Ibid*.

> it is a combination of grit and determination possessed by the men who push their screaming mounts . . .where too much of a controlled skid can cost a man a hard fought victory. Driving the dirt and coming away with a winning reputation is a skill not possessed by every race driver. Some never learn to handle dirt, while others are out of their league once they leave the dusters.[22]

Pavement changed the sport and forced drivers to learn how to race on the "unfamiliar" surface. Dirt master Jerry Blundy contended that "on dirt you usually run down the turn and back off, put the brakes on. These old, flat [dirt] tracks, you had to slow down to make them. On asphalt all you do is you don't even back clear off you just raise about half throttle and just let it carry the speed on by the end of the turn you run fast all the way around. It's just a different style of driving."[23]

As asphalt aged, and tire rubber worked into the surface, side-by-side competition increased. Tire-produced rubber deposits, known as "marbles," created slippery hazards on the edges of racetracks. Sunlight could slicken asphalt tracks, and daytime cloud cover often made pavement quicker. At dusk and into the night changes in air temperature, moisture, and wind cause track conditions to shift. As paved tracks were built larger, all of these factors grew in importance. Dirt masters, by no means, mastered the pavement.

Despite the growth of asphalt racing, the AAA championship division contested most of its schedule on dirt in the 1940s and 50s. AAA championship races resumed in 1946 with an abbreviated six-race schedule. Annual championship events took place at state fair facilities such as Milwaukee, Wisconsin, in 1946 and beginning in 1947, at Springfield, Illinois. The championship series also returned to the Sunbelt for the first time since the 1927 Charlotte board track races. Arlington, Texas, and Atlanta, (Lakewood) Georgia, hosted championship events.

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[22] Bob Russo, "Let's Save the Dirt Tracks," *Speed Age*, July 1956, 81, 83.

[23] Blundy, interview by author.

Chattanooga, Tennessee; Cedartown, Georgia; Raleigh, Charlotte, and Shelby, North Carolina; and Richmond, Virginia, served as AAA-sanctioned, minor-league, (non-championship) venues. Evidenced by the growth of all types of motorsports in Dixie, southerners became hungrier for racing after World War II.[24]

AAA-sanctioned championship racing, unlike other major professional sports such as Major League Baseball, for example, featured East and West Coast events throughout the first half of the twentieth century. The Brooklyn Dodgers and New York Giants moved to California in 1958 to Los Angeles and San Francisco, respectively, but the AAA Championship schedule included Western events since its earliest days. While weather cooled off in most of the nation, the West's arid and warm climate—and passionate motorsports scene—made California and Arizona logical championship racing sites. State fairgrounds' one-mile dirt facilities at Sacramento (1949), and Phoenix (1950), became regular late-season stops for championship racing.[25] Both tracks featured good racing surfaces. One spectator reminisced, "the [Sacramento] track was well-prepared with few ruts and little dust. There were multiple grooves with cars running low, middle, and high grooves."[26]

Championship racing remained the pinnacle of American motorsports. In the late 1940s, nearly every American driver strove to compete in the Indianapolis 500. IMCA-sanctioned dirt-

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[24] For instance, *Milwaukee Mile Program*, 22 September 1946; "Holland Takes Season Opener," *Speed Age*, May 1947, 23; John Kozub, "Myron Fohr takes Trenton Honors," *Speed Age*, September 1949, 22; J. L. Beardsley, "Parsons Victor in Thrilling Milwaukee 200-Mile Classic," *Speed Age*, November 1949; Bob Sterling, "The Championship Trail: Springfield, Illinois," *Speed Age*, December 1949, 23-26; "Four Days of Races in Beer City," *National Speed Sport News*, 8 August 1951, 6; Christy, "Walt Faulkner Winner in Milwaukee 200," *National Speed Sport News*, 29 August 1951, 3, 18; *Illinois State Fair Program*, 21 August 1954; "1948 AAA Automobile Racing Summary." Don Hamilton, "Fair Play," *Racing Milestones*, July 1999, 54-55. Hall, "Carnival of Speed."

[25] John J. Gliebe, "The Championship Trail, "Sacramento, California," *Speed Age*, January 1950; "100-Mile AAA 'Go' at Sacramento Sunday, Oct. 17th," *Illustrated Speedway News*, 28 September 1954, 4; Jack Fox, "AAA 100-Mile National Title Race Garnered by Jim Bryan," *Illustrated Speedway News*, 19 October 1954, 1; *Third Annual National Championship Race*: *Phoenix, Arizona*, November 11 1952.

[26] E-mail correspondence with Roy C. Morris 2 July 2008.

track, open-wheel racing remained major draws at the nation's fairgrounds after the war. The big cars, sometimes called "sprint cars" in the 1950s, were the IMCA's most competitive division and offered as a stepping stone for drivers shooting for Indy. The fair circuit started every winter, usually in Tampa, Florida, and followed the seasonal changes up across the country, proceeding through the summer months in the upper Midwest and Great Plains, until concluding in the southern half of the country in the fall.[27]

Tampa's location and average 72-degree February temperature explained its long-standing popularity. "Scratch" Daniels explained, "Tampa was one of the toughest races on the circuit because everybody wanted to go to Florida in the wintertime because it was warm there and cold up here. So everybody went there. Anybody who was a racer went to Florida and Tampa. It wasn't the biggest money there, by no means. But it was tough competition."[28] Until the mid-1970s, the best IMCA sprint car drivers in the country raced in February every winter for the "Florida State Championship." Tampa's population growth, however, threatened the annual festival of races. The proliferation of the window-unit air conditioner followed by affordable centralized systems contributed to the state's boom, and Tampa was among Florida's quickest and heavily developing cities. Its population of 124,000 in 1950 exploded to over a quarter-million residents by 1970.[29]

During the 1950s and 60s, most IMCA races were geographically divided between two independently operated circuits (National Speedways and Auto Racing Incorporated). In 1941,

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[27] Bob Carey, "What is a Supermod?" *Stock Car Racing*, July 1969, 16-20. Racing terminology can be tricky. At about the same time big cars were called sprint cars, they were also known as modifieds, and, in the 1960s, supermodifieds.

[28] Daniels, interview by author.

[29] Raymond Arsenault, "The End of the Long Hot Summer: The Air Conditioner and Southern Culture," *The Journal of Southern History* 50, no. 4 (1984): 597-628.

Gaylord White founded the National Speedways circuit. Al Sweeney later headed the entity, which competed in Florida and in the Midwest, including Iowa, Missouri, Nebraska, and Illinois. The Iowa State fair in Des Moines hosted the National Speedways' marquee events. Al "Cotton" Farmer, Bob Slater, Bobby Grim, and Jud Larson, some of dirt track racing's biggest stars, raced with the National Speedways Circuit.[30]

Former motorcycle racer Frank Winkley headed the second IMCA circuit. He formed Auto Racing Incorporated in 1947, which promoted IMCA races from 1948 through 1969. Winkley promoted events at most of the tracks in the upper Midwest and Great Plains of IMCA territory. Auto Racing Incorporated featured Ernie Johnson (the Flying Sunday School Teacher), Bert Helmueller (the Kentucky Colonel), Deb Snyder, Clair Cotter, Frank Luptow, and Emory "Spunk" Collins, who raced since the mid-1920s and concluded his illustrious career in 1951. Winkley's marquee events were at the Minnesota State Fair on Labor Day weekend. After the war, the fair in St. Paul became the largest in the nation, and the races remained as some of the most prestigious events on the IMCA calendar. Winkley's and Sweeney's circuits participated together at St. Paul, Tampa, and other selected venues, but separate National Speedways and Auto Racing Incorporated championships took place until 1959. The following year racers competed for a unified IMCA championship.[31]

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[30] Emmett Carpenter, "Belleville Banks," *Speed Age,* September 1949, 22-3; "Sweeney Speaks About the Futurity," *Illustrated Speedway News,* 28 December 1954, 15; Gaylord White, "IMCA," *Speed Age,* July 1953, 7-12; Brad Wilson, "Bob Slater Kingpin at Iowa State Fair Card," *Illustrated Speedway News,* 7 September 1954, 1, 16; L. Spencer Riggs, "The Black Deuce," *Open Wheel,* March 1984, 10-11; Blundy interview by author; "Sweeney-Van Winkle Run State Fair Races," *Illustrated Speedway News,* 28 July 1970, 8.

[31] Larry Sullivan, "Deb Snyder IMCA Big Car Victor at Cedar Rapids," *National Speed Sport News,* 6 June 1951, 2; "Luptow Sails on New K.C. ½ Mile Oval, ," *National Speed Sport News,* 6; June 1951, 2; "Luptow Takes Deb Snyder at Des Moines," *National Speed Sport News,* 6; June 1951, 2;, 23; Frank Lunt, "Belleville, Lincoln Wins to Luptow as Marks Fall," *National Speed Sport News,* 11 July 1951, 3, 22; David Speer, "Helmueller Hot on IMCA Fair Circuit," *National Speed Sport News,* 8 August 1951, 14; "IMCA – Frank R. Winkley's Auto Racing Incorporated – IMCA," *National Speed Sport News,* 2 January 1952, 6-7; "McWithy Outduels Foe in Title Race at Minnesota Fair," *Illustrated Speedway News,* 7 September 1954, 16.

Winkley and Sweeney were well-respected promoters, and most drivers remained loyal to them and seldom raced outside of the IMCA without approval. Winkley and Sweeney advertised the races, made sure the racing was competitive by ensuring full fields, and saw to it that fair goers were entertained. As in the 1910s and 20s, the races always seemed to be neck-and-neck. At the 1954 Tennessee State fair dirt track in Knoxville, 66,606 fans reportedly attended sprint car races sanctioned by the IMCA. The 15-mile feature featured Bobby Grim and Jud Larson alternating the lead five times before Grim took the checkered flag.[32]

Although (apparently) few races were fixed, the "show-biz" element remained, and without question, promoters' exploits factored into the success and popularity of the IMCA. It has been said that before a race, one of Winkley's announcers introduced the driver's name and which championships he had won, sometimes fabricating information. Winkley also had drivers stand in front of the car with their state flag in front of them. Fans embraced their local "hero," and an invader racing outside of his or her community created drama. In fact, this was precisely why some early races were hippodromed, to ensure the hometown favorite or "local boy" prevailed and took the cash.[33]

Midget racing was America's most popular form of motorsport in the late 1940s and early 1950s. The little racecars were so well-received in parts of the Northeast and southern California that midget races could be witnessed seven days a week. Midget fields were big—sometimes over 40 or 50 cars raced at the same time. This sport quickly resumed after the conclusion of World War II, and according to Speed Age, approximately 250 tracks accommodated midget racing in 1946.

[32] "Grim Grabs Fourth Feature Race at Tennessee Fair," *Illustrated Speedway News,* 5 October 1954, 10.

[33]Houston A. Lawing, "South vs. Mid-West Duel at Daytona in Coming Classics," *National Speed Sport News,* 31 January 1951, 5; Jake Bozony, interview by author, 20 July 2000, Hastings, Minnesota, in possession of author. In countless cases no records remain of IMCA races. Many of the IMCA's secrets died with its promoters.

A 1947 study determined that midget racing ranked only behind baseball, football, basketball, and boxing in spectator attendance. The "second" midget racing explosion contributed to the post-war motorsports boom. The AAA sanctioned "the mighty midgets," and regional entities formed during this period. Midget racing became a major-league sport with a regional network of minor-league circuits. [34]

Midget events required smaller spaces than any other version of big-time American racing, making it a popular type of motorsport in urban locales. As in the 1930s, midget racing brought motorsports to the people, and short-term circuits were set up at facilities originally designed for other uses. Urban baseball and football stadiums supported midget racing in Jersey City, Oklahoma City, and Los Angeles. Tracks were dirt or paved, but the midgets also raced on a handful of wooden speedways. The Los Angeles Coliseum's temporary track, for example, showcased drivers racing on ten-foot-long, horizontally nailed-together strips of Douglas fir.[35]

Beginning in 1946, the Bronx's Kingsbridge Armory hosted indoor racing.[36] Drivers battled on a one-fifth-mile oval set up on the Armory's floor, and as Gordon White reflected, "the Kingsbridge 'Speedrome' was an immediate success, unencumbered by competition from

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[34] *URA Third Annual Midget Auto Racing Yearbook*, 1946. Bob Kirwan, "The Mighty Mites," *Speed Age*, May 1947, 15; "Midget Racing is Among Big Five American Sports," *Speed Age*, July 1947, 27; Pete Zanardi, "Remembering Racing's Colorful Past," *Open Wheel*, May 1995, 68-70. An extremely useful primary source is Elwynn Brockway, "*The Roar of the Mighty Midgets: Biographical Review of Present Day Midget Auto Race Drivers* (Paterson, NJ: Rocco Press, 1948). Contemporary articles about regional "midget madness" include Terry Reed, "The Cincinnati Race Bowl," *Open Wheel*, May 2000, 70-77; Andre, "Here and Gone! Midget Car Racing in West Virginia."

[35] For example, Bob Verlin and Walter A. Woron, "The Rebirth of the Boards," *Speed Age*, August-September 1948, 26-28, Bud Booth, "Midget Century at Soldier Field to Johnnie Parsons," *National Speed Sport News*, 11 July 1951, 3, 22; "Midget Debut Draws 8,000 to Jersey City as Charlie Miller Cleans House," *National Speed Sport News*, 11 July 1951, 3.Earl Krause, "Pappy Hough and the Five Little Pigs," *Open Wheel*, September 1991, 56-71; "Layland Crump, "They Spell it "Lavely", but the Southwest Spells it 'Racing'" *Speed Age*, September 1949, 14-15; "Lutkie Beats off Ruby Rally to Win at Taft Stadium," *Illustrated Speedway News*, 27 July 1954, 6.

[36] Stock car races were also held at Kingsbridge. "Chuck Arnold Wins Kingsbridge Opener," *National Speed Sport News*, 24 January 1951, 4.

outdoor tracks in the metropolitan area." [37] indoor amphitheatres in Chicago and Oakland also accommodated the midgets. Dirt and clay formed a temporary mini speedway at the Chicago facility, where midget racers also competed before the war. The Oakland track consisted of a temporary, one-tenth-mile paved surface. Stadium space was available for races when the New York Giants traveled, and beginning in 1948, midget events took place across the street from Yankee Stadium at the Polo Grounds.[38]

At its peak, post-Word War II midget racing encompassed nearly all of the country, and even reached the South. Although few southern midget (or sprint and championship) racers achieved national success, the establishment of a few short-lived midget circuits accommodated southern racers who did not follow the stock car route. In the late 1940s, burgeoning stock car hotspots, such as Birmingham, Alabama; Richmond, Roanoke, and Norfolk Virginia; Winston-Salem and Raleigh, North Carolina; and Columbia, South Carolina, attracted midget racers.[39]

In 1949, car designer and engineer, Frank Kurtis began mass producing Offenhauser-powered midget racecars out of his Glendale, California, shop. His machines were superior in speed and design than most homemade racecars. During the 1930s and 40s, the Offenhauser was the most expensive and most powerful engine in championship racing, and similar technology became available for the midgets. The mass production of the "Kurtis-Kraft Offy" midget racer had three effects: First, the high-performance, high-priced contraption raised the cost of midget

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[37] White, *Lost Racetracks, 75.*

[38] Shorty Fall, "Three Race Schedule Set for Midgets in Chicago," *National Speed Sport News,* 3 January 1951, 3; Bob Garner, "Oakland's Indoor Midget Inaugural to Dick Reece," *National Speed Sport News,* 17 January 1951, 3; "Stan Disbrow Wins Bronx 50 Lapper," *National Speed Sport News,* 7 February 1951, 2.

[39] "Midget Title Race at Raleigh August 7th," *Speed Age,* 27 July 1954, 11; "France Cancels '100' Due to Small Field," *Illustrated Speedway News,* 10 August 1954, 11; Hall, "Carnival of Speed, 2007; "Crise and Streeter Plan Virginia Circuit," *Speed Age,* May 1947, 23; "Midget Racing is Among Big Five American Sports," *Speed Age,* July 1947, 27; "Russo Wins at Birmingham," *Speed Age,* May 1947, 14; *1949 AAA Automobile Racing Summary*; *1955 AAA Automobile Racing Summary*; *1956 USAC Automobile Racing Summary*. Economaki, interview by author.

racing at the entry-level. Second, it eliminated the opportunity for tinkerers to be competitive with home-built cars. Third, and most importantly, it diminished competition on the track. The identically built cars were closely matched and, more importantly, too fast for the small tracks; the racing more often than not resembled a parade with little to no passing.[40]

A disgruntled fan best captured the decline of midget racing in a letter to *Speed Age* magazine:

> Then came the Offenhauser with its Kurtis-Kraft chassis to require the services of only a man with a fat pocketbook, a mechanic trained down the Offy path and a driver with a keen mind and a heavy foot . . . buying racecars on a wholesale basis, like a household appliance you merely plug in.[41]

Stock car racing drained midget racing's popularity in the 1950s. After World War II concluded, stock car racing flourished throughout the United States. The boom persisted into the 1950s. Stock car became the nation's most affordable and popular type of racing at the grassroots level. Fair tracks supported the expansion of stock car racing into smaller cities and towns. Sturdy stock cars, (in comparison with fragile, open-wheelers), required "minimal" track conditions and could race virtually anywhere where enough open space existed to carve out a dirt speedway.[42]

The era's drivers have similar accounts of how they became involved in motorsports. Many started in some form of stock car racing (some with disappointing results). Take Iowan Jim Cadwell, for example:

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[40] Roy F. Morrison, "I Know What's Wrong with Midget Racing!" *Speed Age,"* March 1948, 8, 24-25; Maurie Schmitz, "The West Coast Midget Racing Scene is Reviewed," *Speed Age,* March 1948, 8, 25; Lee Mullin, interview by author, 20 September 2006, Titusville, Florida, in possession of author; Bill Tuthill, "Midget Memories," *Speed Age,* November 1949, 22-23; Roger Huntington, "The New Offy Midget," *Speed Age,* March 1950, 15; Joseph Sheibelhut, "Letter to the Editor," *Speed Age,* November 1950, 6-7; "Farewell to the Midgets," *Speed Age,* February 1951, 28-31; Gordon E. White, *Offenhauser* (Hudson, Wisc.: MBI, 2002).

[41] Joseph Sheibelhut, "Letter to the Editor," *Speed Age,* November 1950, 6-7.

[42] For example, "Jimmy Reece Flees Taft Stadium Pack in Stock Car Melee," *National Speed Sport News,* 15 August 1951, 5 Harold Robinson, "It's Leo Caldwell Again in Fort Miami Stocks, *National Speed Sport News,* 15 August 1951, 5.

> In [19]50, I was 21. Several of us bought a car together. There were three or four of us. . . . And we bought it from a local restaurant fellow. And we were going to take turns running it or racing it. And it didn't last long. The first fellow; he wrecked the car the first night. The second night I run it I wrecked it. . . . So I gave Bill $35 and a Dodge engine for that racecar. . . . Stock cars was what poor people could afford. We could afford $35 for a car. We could go and race it. [43]

Or Texan Gordon Woolley (1963 IMCA sprint car champion):

> So we built an old [19]34 Ford, went out there, out to the track the first time. A friend of mine; we drove out there. I turned it over, and the battery came out, hit me on the head, and knocked me out. Here we are out there just the two of us. Well, I came to, and we got the battery back in and drove the old car back to the garage. That was the beginning.[44]

As mentioned in the previous chapter, many drivers got started in motorsports by racing jalopies (pre-World War II passenger cars modified with different parts from multiple cars).[45] Whatever one chooses to call them, stock cars, modifieds, or jalopies, they were built and souped-up with stock components produced at one time or another by American automobile or domestic parts manufacturers.[46] Jerry "Scratch" Daniels, legendary sprint car driver who got started in jalopies, maintained:

> The first car we ran was a [19]39 Ford two-door. It had a roof over it and it looked like a regular car except no fenders, rollbars on the inside, and no upholstery. . . . The guy that built me that car next year, that was a '38 Chevy coupe. And we used to run a lot of them, those '38 Chevys. The Ford guys would run like '32, '34, '42, ...Just go to a junkyard and get one, and gut it all out and fixed it all up.[47]

Stock car racing's rapid growth made organization difficult, and at times, impossible. Track owners and small sanctioning bodies each had their own sets of rules and regulations, and

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[43] Cadwell, interview by author.

[44] Woolley, interview by author.

[45] These vehicles had a brief heyday from the late 1940s through the 1950s and raced in all parts of the country, independently or as a part of small sanctioning organizations. They remained popular in California until the mid-1960s.

[46] Bill Holder, "A Ranger Aircraft Engine-Powered Sprinter," *Open Wheel*, February 2000, 68-69. Earl Wagner, interview by author, 15 December 2006, Knoxville, Iowa, in possession of author.

[47] Daniels, interview by author.

mandated different body styles, engine displacements, and types of tires. Some required roll bars and windshields, while others did not. Many small stock car-racing entities, such as the National Stock Car Racing Association (NSCRA), South Carolina Stock Car Association (SCSCA), National Auto Racing League (NARL), and the Chicago Hurricane Association, formed in the late 1940s. These short-lived sanctioning bodies provided a growing representation for the developing sport, but stock car racing lacked uniformity and needed a strong centralized entity.[48]

Stock car racing's development differed in the Southeast. Dixie, well-known for minor-league baseball and college football, lacked big-time, professional sports. Southern racing had its roots in poverty, and a low-down combination of sport and technology blossomed in the region. The Mountain South, in general, was one of the most economically depressed areas in the country. Few in the region possessed necessary wealth to purchase or build championship or sprint racecars, but converting stock cars for racing purposes presented an affordable option.[49]

Geology also contributed to the growth of stock car racing. As historian Dan Pierce states, "this cultural hearth of NASCAR-style stock car racing roughly follows the band of red clay from Richmond, Virginia . . . culminating in the vicinity of Birmingham, Alabama."[50] The Southeast had plenty of this material—its red color derived from its high iron oxide content—which for years had been horsed up by bulldozers or cheap, shovel-wielding labor and loaded into the back of dirt haulers and onto railroad cars to be shipped to ballparks across the region and even the country to be spread across the infield of baseball diamonds. For eons the substance

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[48] Lin Hinty, "Hoosier Stock Circuit," *Speed Age*, February 1948, 5; "Stock Car Racing Leaders Form New National Association," *Speed Age*, February 1948, 10, 28-29; *The Midwest Auto Racing News 1950 Annual*; Eddie Samples, "The Rise and Fall of NSCRA," *Vintage Oval Racing*, May 2001, 36-37.

[49] Tom Wolfe, "The Last American Hero is Junior Johnson." *Esquire*, March 1965, 68-75; Daniel, *Lost Revolutions;* Golenbock, *American Zoom*.

[50] Dan Pierce, "Bib Overalls and Bad Teeth: The Southern Piedmont Working-Class Roots of NASCAR." *Atlanta History: A Journal of Georgia and the South* 46, no. 2 (2004): 26-41.

had weathered out of the bedrock and more washed down from the Appalachian Mountains. When Europeans arrived in the sixteenth and seventeenth centuries, the familiar red landscape of later centuries was hard to be seen. The clay lay beneath several feet of rich organic topsoil. Yet three hundred years of clearing forests and intense farming gradually exposed the region's underbelly as the topsoil washed away into rivers, bays, and the ocean.

But where the clay stayed put it often invited auto racing. By the 1930s, a growing number of farmers discovered they could make more money and work less by leasing an unproductive clay field to racing entrepreneurs than by growing crops. Track owners found the clay easy to groom, especially after a light rain, which they sometimes mimicked with water hoses or watering trucks. Drivers liked it because their tires found traction in it, and spectators liked it because it stayed put and out of their eyes, although under dry conditions it could be as irritating as a sandstorm in the Sahara Desert.

A lack of midget and sports-car racing permitted stock car racing to develop mostly unchallenged in the Southeast before World War II. Since its inception in the early part of the century, the AAA rarely sanctioned races in the South—despite the region's longer racing season. Economical, social, topographical, and geographic forces meshed into a "perfect storm." The South had found its big-time professional sport.

It also had the nation's best organizer. Born in 1909, William Henry Getty France grew up in Washington, D.C. and bit by the racing bug at a young age. He lived near the Laurel, Maryland, board track and eventually took up racing in the late 1920s. France moved to Daytona Beach in 1935 with his wife and son Bill Jr. and picked up work as a mechanic. Throughout his career, France's timing was perfect, and the following year, the first major stock car race took place on Daytona Beach. France competed in that disastrous race. Noting that stock car racing

desperately needed organization, France saw an opportunity. In the late 1930s, France started promoting stock car races in the Southeast and raced in some of the events he organized, faring unsuccessful in comparison with early southern stock car legends, such as Lloyd Seay and Roy Hall. France was a better entrepreneur, and he eventually quit driving to become a full-time stock car racing promoter. After unsuccessfully convincing the AAA to sanction a stock car racing division immediately after the war, he inaugurated and operated the National Championship Stock Car Circuit (NCSCC) in 1946 and 1947, an operation he ran out of his house. France envisioned a stronger national organization for stock car racing and embarked on a new quest for order.[51]

In December 1947, members representing the sport from all over the United States—with the exception of the West Coast—gathered in Daytona Beach and formed a new sanctioning body under the direction of Bill France. With the inception of the National Association for Stock Car Racing (NASCAR), most American stock car racing became unified under one banner. In states such as Alabama, Georgia, Virginia, and the Carolinas, the "motorsports power vacuum" created by the AAA's long-standing indifference to the region allowed NASCAR-sanctioned stock car racing to fill the void. NASCAR soon became a national entity with a Southern backbone.[52]

The inaugural 1948 NASCAR campaign featured two divisions of modified stock-car competition. The charismatic France, who had both business savvy and a knack for good timing, brilliantly envisioned the potential spectator appeal of races between showroom models on closed-course speedways. In 1949, the strictly stock division was created and became known as

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[51] "Stocks Going Up! (and Over)" *Speed Age,* July 1947, 14; "Lucky Saucer and W. D. Henderson, "Red Byron Wins Jax," *Speed Age,* February 1948, 5. Thompson, *Driving with the Devil;* Golenbock and Fielden, *Stock Car Racing Encyclopedia*; Howell, *From Moonshine to Madison Avenue.*

[52] Daniel, *Lost Revolutions,* 97.

the Grand National division. France aimed to take the series out of the South, and during Grand National's first season, three of the eight scheduled races were held in the Northeast (all of the races took place on dirt surfaces). Langhorne, Pennsylvania, (just outside of Trenton, New Jersey,) was the new division's first northern stop. Twenty-thousand spectators attended the 200-mile, strictly stock race. The following week, 11,733 fans watched northern-bred drivers dominate a NASCAR event at the Erie County Fairgrounds in Hamburg, New York. A total of approximately 96,000 fans attended Grand National's eight-race debut. This respectable number still paled in comparison with the one-day crowd at the 1949 Indianapolis 500—over 200,000 fans watched the championship cars that Sunday before Memorial Day.[53]

The following year, the first paved Grand National race took place at the new Darlington Speedway. The biggest race of the NASCAR schedule from 1950 to 1958 took place at this 1.366-mile facility in rural South Carolina, located not too far from present-day Interstate 95. Known as the "Lady in Black," Darlington was the nation's first asphalt superspeedway since Indianapolis (paved in the late 1930s) and the South's first. The region, known for its countless minor league ballparks and massive college football stadiums, now had a long-standing, major-league motorsports facility.[54]

Despite the superspeedway success of Darlington, most NASCAR Grand National events took place on smaller dirt facilities during the 1950s. Some races occurred outside of the American South. The story of Morristown (New Jersey) Raceway paralleled that of many racetracks that sprouted up across America after World War II. Joe Soranno, a local florist, owned Morristown Raceway and promoted the events. His story was similar to other

[53] "Bill France to Direct 200 Mile Strictly Stock Car Race Races at Langhorne Sept. 31," *National Speed Sport News*, 24 August 1949, 1; Houston A. Lawing, "Racing's New Era," *Speed Age*, January 1950, 24-25, 40.

[54] Bill Holder, "Coast to Coast," *Stock Car Racing*, September 2007, 30-39; Bill Holder, "Doing it on Dirt, *Stock Car Racing*, January 2006, 22-30.

businessmen exhibiting a passion for auto racing and possessing the capital and business savvy to fund and market a speedway. Most of these men and women were not extremely wealthy but saw a financial and recreational opportunity in the thriving sport.

Considered one of the fastest half-mile tracks in the East, the Morristown Raceway was a dirt oval but not a converted horse track, although the real estate was previously associated with horses. Originally, the Whippany River Polo Club owned the land, known for its lush grass infield and imported Dutch soil.[55] As the *Morristown Daily Record* noted, "the infield is just as green and as smooth as when the cream of New York's society was running their prize polo ponies up and down its greensward. It is a standing joke among NASCAR stock car drivers that they run on foreign soil at Morristown Raceway."[56]

Located approximately 30 miles west of New York City, the multi-purpose track doubled as a stock car and open-wheel racing venue. Morristown Raceway was popular among Garden State drivers, and a local group of racers participated in modified stock car competition every Tuesday and Friday night through the summer months.[57] During the brief five-year span of NASCAR Grand National racing from 1951 to 1955 at Morristown, the great early drivers of the fledgling series competed at the track. As was the case in other areas of the nation, northern aces had the chance to compete against the traveling southern drivers when they invaded their home turf. This was no exception at Morristown. Widely respected New Jersey racers, such as Wally

[55] The facility also served as the Morris County fairgrounds and doubled as a motor-vehicle-license testing ground.

[56] *Morristown Daily Record*, 20 August 1951. The facility was actually located in Morris Township, but as is the case today, speedway names are often assigned to the largest nearby metropolis, and the county seat of Morristown was easily within a mile's reach of the track.

[57] This was one of NASCAR's early regional divisions.

Campbell and Frankie Schneider, were among the locals who competed against top Grand National drivers.[58]

On Friday, August 24, 1951, NASCAR held its first Grand National race in New Jersey. It was a 100-mile affair, and after 200 laps, Tim Flock won in his 1951 Oldsmobile, earning $1,000 for his triumph. Georgia-born Flock and his brothers, Bob and Fonty, billed as "the Flying Flocks," were three of NASCAR's biggest stars. Ticket prices ranged from $2.00 for general admission up to $3.50 for reserved seats, and the *Morristown Daily Record* indicated that 9,000 people were on hand for the event. As local drivers prepared for their subsequent race the following Tuesday, Grand National drivers made a long trek southward to compete the next evening in Greenville, South Carolina. Indeed, professional stock car drivers led demanding lives in those days.[59]

The track closed a few months after the final Grand National race at Morristown in 1955, and the Mennen Corporation purchased the property. An office building and multi-purpose ice-skating facility now exists at the site (not too far away from countless residences). The most densely populated state in America was once one of the most densely populated with racetracks and during the 1930s, Paterson, New Jersey (about ten miles west of New York City), was an eastern hotbed of American motorsports. Many AAA competitors had their race shops in one Paterson neighborhood—known as "Gasoline Alley." Speedways in Ho-Ho-Kus, Dover, and

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[58] J. J. O'Malley, "Racing's Winningest Driver Keeps Changing with the Times," *National Speed Sport News*, 28 September 1978, 23. Schneider won over 1000 races in his career. Campbell was an upcoming AAA star, killed during a race in Salem, Indiana, in 1954.

[59] In the early days the Grand National schedule offered forty to fifty events and it was impossible for drivers to run a full season because France sometimes scheduled two Grand National races on the same day hundreds of miles apart. Bob McGovern, "Grand National Race to Tim Flock," *Morristown Daily Record*, 25 August 1951; "Tim Flock 1st in Morristown Stock Century," *National Speed Sport News*, 29 August 1951, 3.

Woodbridge were less than an hour's drive from Paterson.[60] After the 1950s, the northern half of New Jersey ceased to be an eastern hub of auto racing due to the massive growth of that part of the state. Morris County's population exploded after World War II, as people from slowly decaying industrialized cities such as Newark, Jersey City, and Paterson fled west to the suburbs.[61]

For northeastern fans, Grand National's five-year stint in northern New Jersey served as a vital introduction to the particular brand of stock car racing organized and promoted by the young NASCAR organization. NASCAR and southern-bred drivers played a substantial role in the national development of stock car racing. Northern promoters and track owners worked in conjunction with France and his traveling band of Grand National drivers—most of which were from the Southeast. France coordinated with regional promoters and track owners versed in the stock car experience and started developing regional, minor-league stock car entities in a similar manner as the regional open-wheel divisions of the AAA. By the early 1950s, most major American stock car racing was now held, operated, and organized by a single entity under the control of one man.

As stock car racing's popularity grew, older open-wheel sanctioning bodies, such as the AAA and IMCA, incorporated stock car racing as separate divisions. The AAA's initial refusal to establish a stock car division and the entity's delay in recognizing and accepting the popularity of stock car racing as a "legitimate" form of motorsport was opportunity of domination missed.

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[60] "Mulford Special Stars on Track," *The Automobile*, 19 August 1915, 355.

[61] Don Radbruch, "The Nutley Velodrome," *Vintage Oval Racing*, February 2002, 18-19; Crocky Wright, "The Nutley Velodrome," *Auto Racing Memories and Memorabilia*, Spring 1984, 16-19; Bruce A. Bennett, "Dead or Alive?" *Speedway Illustrated*, November 2000, 66-71; Mike Kerchner, "Nutley Velodrome," *National Speed Sport News*, 19 January 2005, 14; "Bill Randall Stars in Midget Card at Morristown Raceway," *National Speed Sport News*, 26 October 1955, 3, 7.

The AAA finally instituted its stock car division in 1950, giving stock car racing another viable home at the national level.[62]

With the establishment of its stock car division, the AAA hoped to compete with NASCAR for national stock car racing supremacy. The 1950 AAA yearbook stated that "[the] AAA has embarked on an ambitious stock car racing program this year that promises to produce intense rivalry between NASCAR and AAA."[63] On July 9, 1950, the largest crowd in history of the Wisconsin state fairgrounds witnessed the first AAA-sanctioned stock car race. In its 1950 yearbook, the AAA claimed, "the first stock car race since World War II was held at Milwaukee, Wisconsin, on July 9."[64] Note that Grand National was in the midst of its second season, and France's NASCAR events were still viewed as "illegitimate" by the AAA. As it had with the IMCA and CSRA in the 1920s and 30s, the AAA looked down on NASCAR. The AAA's inaugural five-race stock car season drew an impressive 115,548 fans.[65]

Most AAA stock car races occurred in open-wheel-racing hotspots, and over the next few years, the AAA stockers raced at Williams Grove, Pennsylvania; Toledo, Ohio; Springfield, Illinois; Terre Haute, Indiana; and Pomona, California. Southern states hosted the biggest NASCAR events, and the AAA focused on parts of the country outside of the Southeast with limited NASCAR racing. During the AAA stock division's formative years, however, Dixie pilots, such as Marshall Teague and Frank Mundy, dominated the division.[66]

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[62] "Two 500 Milers Added to NASCAR Schedule," *NASCAR Newsletter*, 22 March 1958, 1.

[63] "AAA Late Model Stock Car Circuit," *Speed Age*, August 1952, 25.

[64] *1950 AAA Championship Summary.*

[65] Roger Huntington, "The Truth about Stock Car Racing," *Speed Age*, February 1950, 18-9.

[66] "AAA Late Model Stock Circuit," *Speed Age*, September 1952, 24; "AAA Late Model Stock Cars," *Speed Age*, January 1953, 30-31; "Frank Mundy: He Rode the AAA and NASCAR Grand National Trail," *Illustrated Speedway News*, 18 October 1978, 9; "Ward Wins Milwaukee's Thursday Stock Grind, *National Speed Sport News*, 29 August 1951, 3, 18; T. Taylor Warren, "Auto Racing Roundup," *Speed Age*, July 1953, 30-31.

The IMCA instituted a successful stock car division and held its first event on May 30, 1949, in Topeka, Kansas (three weeks before the first NASCAR strictly stock event). NASCAR and the AAA mostly neglected the Great Plains states. The IMCA filled the void and sanctioned stock car events in Kansas, Nebraska, and the Dakotas. With stock car racing on the rise, and fair economies fully recovered from the Depression, it was a grand era for the IMCA. The sanctioning body played a key role in the development of stock car racing in the Heartland. The IMCA capitalized on stock car racing's boom, and its stock division brought more races to yearly fairs and packed large crowds into small venues.[67]

Undoubtedly, all stock car racing—not just NASCAR-sanctioned racing—popularized throughout America. The success of AAA and IMCA stock car racing clearly proved that. In addition, local clubs sprout up for drivers who usually competed on one or more "home" tracks. The names of some of these entities—the Salt Lake Stock Car Association, the North Iowa-Southern Minnesota Stock Car Racing Association, and Fargo-Moorhead Racing Association—reflected their local flavor. The inexpensive stock car allowed that type of motorsport to grow at a much faster pace than other types of American auto racing. Cost was a major issue in many of the open-wheel divisions, particularly in the AAA.[68] Bill France himself stated in 1952, "the average fellow interested in getting into racing cannot afford a special-built race car. But he can afford a stock car."[69]

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[67] *IMCA Records Volume 7.*

[68] "The Lost Ovals of the Middle West," *FlatOut*, April 2003, 38-41; Jack Hanson, "Don Voge and the Crystal Speedway," *Speed Age*, April 1949, 23; Everett Hanson, "In the Stands," *National Speed Sport News*, 22 August 1951, 18.

[69] Vicker, "Speed Sport is Roaring into its Biggest Boom."

Pricey sports cars occupied the opposite side of the "racecar spectrum." With the establishment of the Sports Car Club of America (SCCA) on February 26, 1944, road-racing competitors had a permanent sanctioning body in America.[70] The SCCA became the first fully nationalized American response to European-style road racing. World War II also played a role in the development of sports car racing and participation significantly increased during the late 1940s and 1950s. American GIs developed an affinity for some of the cars they drove in Europe and a taste for racing on European road courses. They returned home and purchased sports cars; some brought cars over from Europe.

In its formative years, the SCCA struggled with the definition of a sports car and degree of modification that should be permitted. Not long after the SCCA's inception, the new entity specifically updated its definition of a sports car, stating that "sports cars are like yachts in many ways; they're both used for pleasure travel, both are among their owner's most cherished possessions . . . both are the source of endless arguments over different types, and except in the sunny South, both come out in the spring." To be sure, some sports cars were, in essence, exotic and expensive stock cars. Additional classes of competition—based on engine displacement, componentry, and aerodynamic modifications—developed with the SCCA. [71]

As was the standard with ARCA the decade earlier, SCCA competitors raced for trophies, not cash. SCCA membership—in comparison to the exclusionary and gentlemen-dominated ARCA—was much larger. From its inception, the SCCA quickly attracted more middle-class competitors. Also unlike ARCA, the SCCA quickly nationalized—spreading rapidly across America from East to West. The entity became organized by zone (or region). By early 1947,

[70] *The Sportswagen*, March 1944, 1.

[71] *The Sportswagen*, April 1944, 3.

five zones—Boston, New York, Philadelphia, Buffalo, and Indianapolis—divided the SCCA. Sixteen regions existed by 1949; Florida (1947), Texas (1948), and Tennessee (1949) formed the initial southern zones. Although most popular in the Northeast, the "club" now had a national presence.[72]

Sports car racing venues increased in numbers. In 1949, the upper-class town of Bridgehampton, Long Island, hosted races on a flat, four-mile road course. In 1950, wealthy Palm Beach, Florida, accommodated the SCCA, and these street-circuit events entertained 25,000 spectators. That same year, an abandoned airstrip in Palm Springs, California, nestled at the base Mount San Jacinto and home to luxury golf resorts, hosted the West's first major sports car race.[73]

For a brief time, the European tradition of racing on public roadways returned to America. After gaining necessary approval from the New York State government, the SCCA sponsored a major road-racing event at Watkins Glen, New York, in 1948. The race took place on a picturesque six-mile, hilly and winding street-circuit that snaked through the heart of the village. Aesthetics were still an important component of road racing, and as the Watkins Glen race indicated, natural (and artificial) scenery remained a big part of the sports car racing spectacle. The successful inaugural event attracted approximately 25,000 spectators. The 1949 event was an even greater smash, and according to some reports, an estimated 100,000 spectators attended the race. This particular layout lasted only briefly—the final event on the original Watkins Glen street circuit took place in 1952. After a fatality-marred race (a spectator was killed), the New

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[72] *The Sportswagen,* March/April 1946, 1; *The Sportswagen,* January/February1947, 2; *Sports Car,* January/February 1949, 1. (By 1949, there was an SCCA branch in Canada). *Sports Car,* January/February 1945, 1.

[73] Smith Hempstone Oliver, "Road Racing – Bridgehampton Style," *Speed Age,* September 1949, 20-21; Jack Campbell, "Sunny Cal's Sports Cars," *Speed Age,* February 1949, 22-23; Don O'Reilly ,"The Sports Cars' Big Year, *Speed Age,* April 1950, 12-3; J. Thatcher Darwin, "Palm Springs Road Race," *Motor Trend,* June 1950, 20, 28; Jack Campbell, "Palm Springs Grand Prix," *Speed Age,* August 1950, 33.

York government backed from its liberal stance regarding racing on public roadways. In 1953, race organizers moved the circuit outside of the town center onto surrounding rural roads. A permanent, contained road course (Watkins Glen International Raceway) opened in 1956.[74]

American road-course development, of course, was partially based on geography and the environment. During the 1950s, enthusiasts carved tracks out of pastures, forests, and hillsides. The Road America race course at Elkhart Lake, Wisconsin, meshed motorsports with natural aesthetic. As a 1956 issue of a *NASCAR Newsletter* maintained, Road America was "nestled like a gem in its beautiful kettle moraine [state forest] setting."[75] The over four-mile-long racetrack twisted and turned through a forest dominated by red oaks and sugar maples. To this day, one can venture out to secluded vantage points to witness the racing action, and the winding trail network within the track is a favorite of mountain bikers and hikers. "Closed" road courses occupied rural, sometimes rustic, and somewhat secluded areas, which partially explained the long-term survival of circuits such as Watkins Glen and Elkhart Lake.[76]

After World War II, sanctioned and unsanctioned motorsports became common at former military bases and active municipal airports. Beginning in 1950, the AAA added a sports car division and co-sanctioned seven events with the SCCA, and most of the races took place on converted airstrips in New York, New Jersey, California, and Florida. Airports offered long straightaways, smooth pavement, wide turns, and often permitted panoramic spectator views. In fact, the first NASCAR Grand National race won by a foreign car took place in 1954 at an

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[74] The race was co-sanctioned by the SCCA and AAA. Don O'Reilly, "Sport Cars Return to the Glen," *Speed Age*, December 1949, 27-9; Elvin Mobley, "Auto Racing's U.N." *Speed Age*, October 1950, 28-9; Brown, *The History of America's Speedways*, 389.

[75] "Road America Prepares," *NASCAR Newsletter*, 31 May 1956, 1.

[76] William Edgar, "A Riverside Reunion," *Vintage Motorsport*, March-April 2004, 98-100; Sandy Grady, "Tim Flock Wins at Road America, Wisconsin," *Speed Age*, December 1956, 64-5, 94; "Elkhart Lake Road Race Planned," *NASCAR Newsletter*, 10 April 1956, 1; "Road America Prepares," *NASCAR Newsletter*, 31 May 1956, 1

airport course in Linden, New Jersey. Al Keller's English Jaguar outpaced the lumbering American Hudsons and Buicks that day.[77]

Airports eventually supported the growth of drag racing. After World War II, this form of motorsport exploded in southern California, as caravans of racers and spectators headed to the el Mirage Dry Lake in the Mojave Desert for SCTA-supervised speed meets. As was the case of the Bonneville Salt Flats, a prehistoric lake bed provided a smooth fast surface. Space was no issue, and hot rodders had well over a mile to gain momentum and generate top speeds. However, intensive use of nature's surface stirred up the sand to the point of unsafe conditions. As hot rods became faster, they sapped the surface of its moisture and generated more dust. Spinning tires created hazards. "Artificial" sandstorms restricted driver vision and prevented safe head-to-head racing on the lakes. These limitations brought hot rodders back from the wilderness, and drag racers "graduated" to pavement. Forced to find new drag strips, hot rodders either turned to airports, or with growing frequency, municipal streets.[78]

Although smooth pavement mimicked hard-packed sand, natural geography remained best suited for land-speed records, and asphalt strips were ideal for duels. Land-speed assaults continued in the California desert, but Bonneville became the premier worldwide stage for speed. Suitable surfaces existed in parts of Africa and in the Australian outback, but the Utah desert

[77] Charlie Vallely, "The Day the Stocks Tumbled," *Newark Star Ledger*, 22 July 2007. The AAA was recognized and respected in Europe and its involvement increased European awareness of American sports car racing. (The global sanctioning body, the Federation Internationale Automobile was also founded that year.

[78] Clark Roberts, "Expert Hot-Rodders Scorn Reckless Speeding on Crowded City Streets," *Los Angeles Times*, 20 November 1949; "Police Say Hot Rod Race Supervision Pays Off," *Los Angeles Times*, 5 November 1950; Post, *High Performance*; Moorhouse, *Driving Ambitions.*

remained the fastest and most accessible natural speed-testing venue known to humans.[79] Deserts and their miles-long straightaways fostered the highest speeds because racers had ample space to accelerate and safely slow down. On the drag strips, the importance of properly heating up the tire rubber at the starting line, initial vehicle acceleration, and human reaction time were of vital importance in a head-to-head drag race of a quarter-mile or less.[80]

The first major facility for paved drag racing was at Santa Ana, an Orange County airport that sometimes served as a drag strip. Eventually the growing demand for commercial aviation in southern California pushed the hot rodders out of Santa Ana in 1959 (present-day John Wayne Airport). The lease was not renewed, but by then hot rodders had additional closed-course facilities available throughout Southern California.[81]

Hot rodders quickly phased out head-to-head competitions on airstrips in favor of purpose-built drag strips of asphalt to which tire rubber adhered best. Shortly after Santa Ana, strips opened at Saugus, New Jerusalem, and Salinas, California, in 1950. In 1951, Los Angeles County provided necessary land needed for a permanent drag racing venue, and the "granddaddy" of drag strips was built at the Los Angeles County Fairgrounds in Pomona. The strip exists to this day.

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[79] Despite the fact that a highway and railroad tracks makes the potential course about five miles shorter. J.L. Beardsley, "Meteors of the Measured Mile," *Speed Age,* December 1948. 4-7; John C. Bartlett, "Challenger of Design and Speed," *Speed Age,* December 1949, 16-17, 22; "Safer on the Salt," *Hot Rod,* May 1950, 9-10; John Bartlett and Mark Rene, "More Speed on Salt!" *Speed Age,* December 1950, 26-27; "Utah Salt Flats: Once Explorers Death Trap," *Illustrated Speedway News,* 9 November 1954, 8; "Roger Huntington, "What Price 400 MPH?" *Speed Age,* March 1951, 23-25; Thompson Sets 4 Records," *Illustrated Speedway News,* 13 October 1959, 8.

[80] Woron and Logue, "Timing the Hot Rods," *Speed Age,* February 1948, 12, 25; Wally Parks, "Controlled Drag-Races," *Hot Rod,* April 1950, 8-9.

[81] Jack Curnow, "Cycles, Hot Rods Mix at Santa Ana," *Los Angeles Times,* 16 July 1950; Lou Baney, "Drag Racing: Bean Fields to Big Bucks," *Hot Rod,* January 1973, 132; Greg Klerkx, "Drag Strips to Runways, JWA's Seen it All," *Orange Coast Daily Pilot,* 29 January 1989.

Like stock car racing, drag racing was loosely organized immediately after World War II. Wally Parks formation of the National Hot Rod Association (NHRA) in 1951 stabilized and legitimatized the sport in response to unfriendly media outlets and increased calls to law enforcement about the growing "problem" of hot rods. The NHRA provided memberships to competitors and started staging organized meets across southern California. Soon after, the NHRA started sanctioning events across the country. Eventually, the NHRA became the premier drag racing entity in the United States.[82]

The growth of head-to-head competition forced drag racing off the beach and onto the public roads and airstrips, and then, finally, onto purpose-built drag strips. The sport now had legal venues on which to contest races, and head-to-head racing became better organized in the decade. Deviant youths, however, still raced on public roads. The classic film *Rebel without a Cause* was released in 1955, during the growth years of California drag racing. Its most famous scene features a chicken race between Jim Stark (James Dean) and Buzz Gunderson (Corey Allen). Gunderson fell to his death when his stolen car plunged off of the edge of a cliff. Nineteen-fifty-five was also a tragic year in auto racing. Over eighty spectators perished at LeMans, France, when a fiery car leaped into the crowd. At the Indianapolis 500, American racing hero Bill Vukovich died in a grisly accident. Despite American auto racing's growing appeal, public and political calls to ban racing and insurance costs dramatically increased. As a result, the AAA, concerned with its public image, severed its ties with auto racing at the end of the season and turned its business solely to facilitating domestic auto travel. Later that year, the United States Auto Club (USAC) formed and continued the AAA's long-standing practices.[83]

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[82] Yates, *Hot Rod*, 60-61.

[83] "Auto Racing Organizing New Group," *Washington Post*, 28 August 1955.

In the 1950s, most government and grassroots interference stemmed from issues of safety. There was some state and federal criticism directed toward motorsports, but legal and political challenges to ban the sport were, for the most part, unsuccessful. At the same time, scholars and scientists started to question humanity's future with the environment. The widespread problems and pollution created by automobiles started to gain public awareness. The memorable planetarium scene from *Rebel without a Cause*—where behind James Dean's car on the edge of the cliff in the background lurks a dense smog hovering over a *sprawling* Los Angeles—presented a foreshadowing of the worsening ominous connection between automobiles, pollution, and suburbanization. The environmental factors suggested in celluloid fashion would directly intersect with the development and survival of auto racing. Nevertheless, the developing American environmental consciousness, brewing in the 1950s, initially had minimal impact on motorsport, and concerns over the connections between racing and ecological issues such as wetland protection and pollution were yet to come.[84]

[84] "3 Anti Racing Bills Proposed," *National Speed Sport News*, 24 January 1951, 1-2.

CHAPTER 5
SUPERHIGHWAYS, SPRAWL, AND SUPERSPEEDWAYS (1956-1969)

By 1960, more Americans would live in suburbs than in cities.

—*Tom Lewis*[1]

In the case of Holmes Road Speedway, which back in the [19]60s was way out south and clear out in the sticks, today, it's a huge housing development, so they took over and then that's the end of that.

—*Greg Weld*[2]

During the 1960s, technological and aerodynamic advancements produced sleeker, faster, and more expensive racecars. By late in the decade, fins and spoilers protruded from stock cars and overhead wings appeared on sprint cars. These add-ons and modifications provided cars more downforce, which generated faster straightaway speeds and greater grip in the turns. Speeds in some forms of motorsport approached, or eclipsed, 200 miles-per-hour, and encouraged the construction of larger and higher-banked tracks to accommodate faster and more powerful racecars.[3]

As racecars turned more high-tech, they became more costly. An increasing number of drivers and car owners sought sponsorships, and corporate logos plastered the hoods and side panels of cars. Domestic and international industries, particularly petroleum, tires, and automotive component companies, increased their support of American motorsports. In the

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[1] Tom Lewis, *Divided Highways: Building the Interstate Highways, Transforming American Life* (New York: Penguin, 1997), 71.

[2] Greg Weld, interview by author, 31 May 2007, Kansas City, Missouri, in possession of author.

[3] Dale Drake, "Don't Put the Offy in the Grave Yet," *Illustrated Speedway News*, 8 February 1966, 4; Roger Huntington, NASCAR and the American Car," *Stock Car Racing.* March 1970, 24-27; Marty Little, interview by author, 26 July 2006, Fort Lauderdale, Florida, in possession of author.

years ahead, this connection between technology and economy became critical in auto racing's development.[4]

Cosmetic and performance changes to racecars only partially defined the development of racing during this time. Heading into the 1960s, the construction, destruction, and survival of motorsports facilities became more contingent on geographic and environmental forces. The late 1950s and 1960s saw an emergence of new short tracks, but in comparison with the ten-year stretch after World War II, speedway construction decreased. The construction of major long-lasting facilities, specifically road courses and superspeedways, characterized this period. The 1960s marked the proliferation of multi-purpose facilities, which accommodated oval, road circuit, and drag racing.

Permanent road courses, though existing in Europe for decades, finally emerged in the United States after World War II. In the 1950s and 60s, sports car racing's growth kicked off a rural, road-course building boom, which facilitated that distinctive form of racing enthusiasm. This type of motorsport spread nationwide and gained middle-class fans and competitors—its largest contingent still centralized in the Northeast, Florida, and California. Although USAC and other entities sanctioned road racing, much of this form of motorsport remained under the auspices of the SCCA, which continued to branch out into smaller regional and local clubs. In addition, a new national road-racing entity, the International Motorsports Association (IMSA), formed in 1969. Airport racing waned as the number of road courses increased, and twisting,

[4] Charles B. Camp, "Selling with Speed," *Wall Street Journal*, 29 May 1967; Roger Huntington, "Wings and Things," *Stock Car Racing*, July 1970, 18-21; Gordon Kirby, "Superspeedway Dilemma," *Racer*, January 1997, 96.

winding permanent tracks emerged in rural Ohio, Minnesota, Virginia, Connecticut, and West Virginia.[5]

After World War II, California debuted new road courses at Willow Springs (1952), and Torrey Pines (1953), Paramount Ranch (1955), Monterey (1958), and Sears Point (1969). Riverside International Raceway, which first hosted races in 1957, became southern California's Mecca of auto racing in the 1960s. Riverside was located about an hour's drive east of Los Angeles in the sparsely populated wine-growing desert community of Moreno Valley. The track accommodated all forms of motorsports and attracted domestic and foreign competition.[6]

The Golden State's moderate climate attracted all-star events. During the winter months, after the conclusion of their respective seasons, the nation's best drivers towed their racecars west and competed in prestigious and financially lucrative special events in California. It developed many of the nation's most successful drivers in all disciplines, including stock-car competition. Golden State drivers Dan Gurney and Indianapolis 500-champion Parnelli Jones dominated on California tracks against Dixie drivers at NASCAR Grand National events. Gurney won five Grand National events at Riverside.[7]

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[5] Sports car and road racing are synonymous. Carl Goodwin, "Brynfan Tyddyn," *Vintage Motorsport,* Mar/Apr 2005, 54-64; Art Lauring, "Sports Car Feature Won by Shelby," *Los Angeles Times,* 4 November 1957; Art Lauring, "From the Pits," *Los Angeles Times,* 8 September 1957; Art Lauring, "Lovely Wins Road Race Before Record 65,000," *Los Angeles Times,* 11 November 1957; Frank M. Blunk, "Racing is Approaching Stage Where Tracks Will Have to Pay Drivers," *New York Times,* 2 October 1957; D. M. Bartley, "Will USAC Kill off Amateur Racing?" *Speed Age,* October 1958, 10-11, 64-66. The SCCA finally professionalized in 1962.

[6] Paramount Ranch only lasted for a year-and-a-half. Torrey Pines was replaced by a golf course (site of the 2008 US Open). "Sports Car Track Ready for First Event," *Los Angeles Times,* 12 August 1956; "Hangsen Pilots Lola-Ford to Monterey Grand Prix Victory," *Illustrated Speedway News,* 19 October 1965, 3; John Zimmermann, "Half a Century at Laguna Seca, Part I, 1957-1982, *Vintage Motorsport,* July/August 2007, 78-95; Lance Troy, "The Last of the Torrey Pines," *Speed Age,* May 1956, 61-62, 86.

[7] "NASCAR-USAC-SCCA Clash in Riverside 500," *Illustrated Speedway News,* 1 January 1963, 2; "It's Gurney at Riverside," *Illustrated Speedway News,* 22 January 1963, 1; Bob Gates, "Parnelli," *Open Wheel,* June 1997, 65-78; Ron Lemasters Sr., "USA and the Top 25," *Open Wheel,* January 2000, 72-73; Matt Stone, "Dan Gurney Wins the Motor Trend 500 at Riverside," *Motor Trend,* February 2003; "Bobby Unser Wins USAC Crown with Point Record," *Illustrated Speedway News,* 3 December 1968, 2; Shav Glick, "Last Go-Round Recalls Legends of Famed Track," *Los Angeles Times,* 7 August 1988; Art Loya, "Woolley has 'Field Day' at Imperial," *Illustrated Speedway*

Although sports car and stock car competition thrived in California, the 1960s marked a golden era for all types of open-wheel racing in the state. The region's fixation with exotic cars tended to gravitate toward sleeker and faster championship racing, and as one long-time fan of California motorsports put it, "at the time, stock car racing was not as popular as 'champ' car racing and, in my opinion, would not have drawn the same size crowd."[8] USAC sanctioned well-attended championship races at Riverside and Sacramento. In addition to USAC, the California Racing Association (CRA) sanctioned west-coast racing. The highly competitive and respected CRA became a premier regional open-wheel entity.[9]

Arizona's arid climate, deserts, and mountains resembled southern California. Arizona's racing history, however, paralleled both California and the Midwest. The one-mile dirt oval at the Arizona State fairgrounds in Phoenix served as the Southwest's open-wheel racing hub. This track had a quirk. One former fan and competitor remembered "vividly [about] the track's configuration was a 'pocket' formed by the grandstands being set back along the front stretch. The 'crash wall' along the front stretch followed this 'pocket' configuration and provided some extra track width." This classic facility showcased some of the most memorable USAC championship division races.[10]

Built in 1964, the Phoenix International Raceway replaced championship racing at the dirt fairgrounds. Located in the suburb of Avondale, west of Phoenix (both are within Maricopa County), this one-mile, paved oval allowed views of the racing action atop adjacent desert

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News, 12 March 1963, 12; "C.R.A. Sprint Feature Pocketed by Woolley," *Illustrated Speedway News,* 9 March, 1965, 3; Joe Scalzo, "California Stock Car Racing," *Stock Car Racing*, October 1968, 42-45.

[8] E-mail correspondence with Roy C. Morris 2 July 2008.

[9] Art Loya, "CRA Okays 100-Mile Phoenix Sprint Car Race," *Illustrated Speedway News,* 1 January 1963, 2; "Hogle Heads Field for CRA '68 Finale at Ascot Sunday," *Illustrated Speedway News,* 3 December 1968, 2.

[10] E-mail correspondence with Roy C. Morris 2 July 2008.

hilltops. With the construction of this new track, Arizona remained an open-wheel racing hot spot, and more importantly, the desert climate permitted year-round racing. After World War II, Maricopa County's population exploded from 331,770 (1950) to 967,522 (1970). As Phoenix became a major-league city, it also demanded a major-league racetrack. Big-time motorsports came to Phoenix well before the National Basketball Association (NBA) Phoenix Suns in 1968 and National Football League's (NFL) Arizona Cardinals in 1988.[11]

Although the Phoenix market remained a USAC stronghold, the new track, more importantly, reflected a continuing nationwide trend toward pavement racing. In 1954, the Wisconsin state fair eliminated its horse racing roots. When Minnesota switched over in 1964, the dirt-to-asphalt transition affected another of America's most popular fair tracks. With the possible exception of Iowa, the Minnesota state fair races occupied the biggest events of the IMCA calendar. The track in St. Paul was built in 1907 and hosted countless AAA, IMCA, and other auto races on its famous dirt surface through 1963. After World War II, races sometimes occurred on every day of the fair, up to ten days. Crowds occasionally surpassed 30,000, and the last dirt race attracted 25,813. The fair board decided in favor of the conversion, in part, because asphalt was more convenient and easier to maintain during the fair, and minimal maintenance meant reduced downtime between heats and quicker clean up at the end of events. Pavement eliminated the dust problem, too.[12]

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[11] The NFL franchise moved from St. Louis to Phoenix beginning with the 1988 season. Joe Scalzo, "Desert Jewel," *Circle Track*, April 1986, 58-63. According to the U.S. census, the 2000 population of Maricopa County was 3,072,149.

[12] For brief reviews of IMCA and AAA races at the Minnesota State Fair, see Ray P. Speer and Harry J. Frost, *Minnesota State Fair: The History and Heritage of 100 Hundred Years* (Minneapolis: Argus, 1964); "Ruttman Romps Roughshod over Big Cars at St. Paul," *National Speed Sport News*, 29 August 1951, 2; Marsh Muirhead, "The Last Great days of Dirt at the Minnesota State Fair," *Open Wheel*, May 1984, 31-33; Marsh Muirhead, "Of Wings and Things and Bygone Days," *Open Wheel*, August 1982, 80-81.

Throughout most of America, enthusiasm for asphalt racing reached new heights. Dirt-to-asphalt conversions sometimes produced disappointing results. The paved Minnesota State Fair track failed to become a fan or competitor favorite. Sprint Car Hall of Famer Jerry "Scratch" Daniels put it bluntly, "Saint Paul on dirt was just awesome. But when you made pavement out of it, it was 'run' on the bottom and step on the brakes and it just wasn't a real good racetrack."[13] Follow-the-leader, parade-style racing became standard at St. Paul.

The growth of paved racing helped asphalt track racers but hurt dirt track specialists. It was unpopular among many IMCA competitors, most of whom cut their teeth on dirt tracks. Although drivers adapted rather quickly, many remained loyal to dirt and expressed a disdain for pavement. The essence and aesthetic of the sport changed with the surface. As journalist William Holder observed, "the condition of the car on pavement is the key. It must be working perfectly. The driver . . . plays a much more important role on dirt. He can make up the difference when the car isn't quite up to par."[14] The growing popularity of asphalt racing, and the fact that former dirt venues on the schedule were now paved, forced drivers to stick with one surface or become multi-disciplinary and learn to race on pavement. Though beginning in the late 1940s and 50s, the 1960s marked this major shift. Some racers and fans made the transition with reluctance.[15]

After the AAA ceased its motorsports involvement in 1955, Indianapolis Motor Speedway president Tony Hulman founded the United States Auto Club (USAC). Essentially, USAC assumed an identical role as its predecessor, but American championship racing's headquarters moved from Washington, D.C., to Indianapolis. This made sense, for most USAC events (all

[13] Daniels, interview by author.

[14] William Holder, "The Dying Art of Driving on Dirt," *Auto Racing Digest*, November 1977, 26.

[15] Blundy, interview by author; Daniels, interview by author; Shav Glick, "On Sprint Car Circuit, Dirt is Name of the Game," *Los Angeles Times*, 26 October 1982.

divisions) took place in the Heartland. USAC was open-wheel racing's premier entity and consisted of a three-stage feeder system. From midgets to sprint cars to championship cars formed the typical path drivers took as they aspired to reach Indianapolis. The skills developed on the shorter tracks and the smaller cars served well for drivers that wished to move up to the technologically superior, faster, and more powerful championship cars. Beginning in 1956, USAC sanctioned the Indianapolis 500, and that event remained the most prestigious American race on the global stage. Absent since the 1910s, top European drivers returned to America to race in the Indianapolis 500. The event was part of the Formula One World Championship. [16]

Outside of Indianapolis, the Midwest remained predominately dirt track racing territory—but, as the St. Paul and Milwaukee fair tracks indicated, with a growing number of major exceptions. As the 1960s progressed, fewer championship races occurred on dirt, and USAC scheduled more events on road courses and asphalt speedways. Championship racing became more "interdisciplinary," and drivers competed on three types of circuits—dirt oval, paved oval, and paved road course. By 1969, the USAC championship schedule consisted of events scattered at seven paved ovals, four road courses, and only five dirt venues. Sprint and midget car divisions also gravitated toward asphalt, and USAC and the IMCA featured more paved events in the 1960s.[17]

The 1960s was the most competitive decade of IMCA open-wheel, sprint-car racing competition. By the late 1950s, USAC—unlike its predecessor (AAA)—relaxed some of its licensing requirements and restrictions. "Outlaw" IMCA drivers found it easier to jump over to

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[16] "Don White First in Stock Classic; is Booed by Record Crowd," *Illustrated Speedway News*, 25 June 1968, 1; Russ Catlin, "How to Save Racing in America," *Speed Age*, November 1955, 12-15, 83-85; "Auto Racing Organizing New Group." In 1961, USAC eliminated the eastern and Midwest sprint car divisions and combined them into a single national sprint car championship.

[17] Don O'Reilly, "Racing the Stocks," *Hot Rod*, September 1957, 62-63; *Langhorne, 1965 Souvenir Program.*

USAC. Although they still "looked down" on the IMCA as a minor-league fair organization, USAC owners and sponsors searched the Heartland for new talent. In the late 1950s and 1960s, "young guns"—A. J. Foyt, Jim Hurtubise, and Johnny Rutherford—used the IMCA as a launching pad to future stardom in USAC championship racing and at Indianapolis. Late National Sprint Car Hall of Famer Greg Weld represented the point-of-view of many of his fellow enshrines and stated, "my objective all along was how to get to the *Speedway*, how to get to the Indy 500."[18] Midwestern drivers shot for Indianapolis, not Daytona stardom. The fair circuit remained very popular, and the IMCA sired some of its richest talent ever.[19]

Colorful heroes have always been a part of the Midwestern dirt track racing stage. The IMCA, in the 1960s, had a memorable cast of characters in the 1960s whose racing names depicted their socioeconomic and geographic origins, and all of whom eventually entered the National Sprint Car Hall of Fame. Originating from the Twin Cities (Minnesota) region was Jerry Richert and Jerry "Scratch" Daniels. Earl "the Racing Plumber" Wagner was from small-town Pleasantville, Iowa, the "Potato Farmer" Don Mack hailed from East Grand Forks, Minnesota. "Texas Tornado" Gordon Woolley came from Waco, and finally, Kansas City's Weld Brothers, (Jerry, Greg, and Kenny) known as the "racing mafia, " raced in and around Kansas City at different dirt tracks, namely Holmes Road Speedway, Olympic Stadium, Riverside Speedway, and Lakeside Speedway (all defunct). All of these drivers fared extremely well when they ventured to Florida or California for special events.[20]

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[18] Weld, interview by author.

[19] Dean Conklin, "I.M.C.A. Auto Racing Round-Up," *U.S. Autosports*, November 1964, 47-49; Wayne Shufelt, "The Golden Year of I.M.C.A, 50-Year History," *U.S. Autosports*, February 1965, 12-19; "77 Racing Cars to Battle for Indy 33-Berth Field,' *Illustrated Speedway News*, 23 April 1968, 3, 14; Woolley, interview by author.

[20] Wayne Panter, "IMCA to Mark 50th Anniversary," *Illustrated Speedway News*, 26 January 1965, 9, 11; Bob Smith, "Weld Wins Anniversary '50'" *Illustrated Speedway News*, 16 February 1965, 4; Jack Lindberg, "The Wheeling Welds, Part I," *Stock Car Racing*, Spring 1969, 46-48; Joe Scalzo, "The Wheeling Welds, Part II," *Stock*

Although the above drivers competed predominately in open-wheel competition, some Midwestern drivers pursued stock car racing. Three major entities—USAC, IMCA, and ARCA—sanctioned stock car racing in the Midwest, and the region produced drivers that also excelled in NASCAR Grand National competition during the 1960s. [21]

Johnny Beauchamp, Ramo Stott, Dick Hutcherson, Don White, and Ernie Derr hailed from Keokuk, Iowa, in the southeast corner of the state. Known collectively as the "Keokuk Komets," they dominated IMCA stock car competition for years. The IMCA proved to be one of the top feeder series for those drivers who sought to enter the Grand National Series. Hutcherson (14 Grand National victories) and Beauchamp (two Grand National victories) brought their talents South. Stott and White also fared well in USAC stock division. Indeed, Keokuk was a championship city; no Southeastern city boosted as many successful stock car racers. Derr won eleven IMCA championships. [22]

Car Racing, March 1969, 30-33; Jack Lindberg, "The Wheeling Welds, Part III," *Stock Car Racing*, February 1969, 16-18; "Greg, Ken Weld Sprint Nationals' Premier Brothers," *National Speed Sport News*, 8 August 1979, 19. Jerry Weld has yet to be elected to the Sprint Car Hall of Fame.

[21] ARCA was known as the Midwest Association for Race Cars (MARC) from 1952-1962. Toledo-based ARCA served as a minor league organization that attracted mostly Midwestern drivers. ARCA formed in 1953 and remained a strong regional stock car entity. It still exists today as a national minor league stock car sanctioning body that competes on superspeedways as well as paved and dirt short tracks. Dick Gerald, "A Look Back at the 1965 United States Auto Club Stock Car Division," *Stock Car Racing*, May 1966, 44-45; David Fall, "Yankee 300," *Stock Car Racing*, September 1966, 52-53; "ARCA News," *Stock Car Racing*, April 1968, 9; Gale Pifer, "Racing: Corn Belt Style!" *Stock Car Racing*, March 1968, 46-47; "USAC Rebellion," *Stock Car Racing*, September 1968, 6-7.

[22] D. A. Davidson, "Keokuk: Race Town, U.S.A.," *Stock Car Racing*, January 1971, 34-35, 58; "Derr Named Stock Titlist after Six-Year Drought," *Illustrated Speedway News*, 24 November 1959, 12; "IMCA Late Model Crown is Still up for Grabs," *Illustrated Speedway News*, 18 October 1966, 2; *1961 I.M.C.A. Year Book*; *1962 I.M.C.A. Yearbook*; *1963 I.M.C.A. Year Book*; Brad Wilson, "Beauchamp Victor at Des Moines, *Illustrated Speedway News*, 24 July 1956, 1; "You Can Beat Ernie Derr . . . If You're a Walter Mitty," *Illustrated Speedway News*, 23 June 1970, 24; "Former NASCAR Driver Hutcherson Dies at Age 73," *NASCAR Scene*, 10 November 2005, 69; Larry Cothren, "A Deserving Racer," *Stock Car Racing*, March 2006, 10; Jack Miller, "The IMCA Fans Responded," *Open Wheel*, February 2001, 58; "National Speedways to Open Heavy Fair Schedule," *Illustrated Speedway News*, 3 August 1965, 6.

The small city of Fargo, North Dakota, like Keokuk, also had a vibrant motorsports scene and a storied history of IMCA competition. Situated in the heart of the Red River Valley on the west bank of the northward flowing Red River of the North, Fargo hosted auto races for over one hundred years. The original fairground and track site in north Fargo—used for races beginning in 1906—fell in the path of the bulldozer. Fargo outgrew the location, and development was planned in the area surrounding the old fairgrounds. Ramo Stott won the last event at the Fargo fairgrounds, a 100-lap IMCA stock car race, on July 15, 1966. A new fairground project, intended to accommodate more people and traffic as the Red River Valley's population increased, was developed west of the city.[23]

Opened on August 18, 1967, the Red River Valley Speedway became, by far, the premier motorsports complex in the upper Midwest. The speedway marqueed IMCA racing during the fair from 1967 through 1969. Historically, in part, because of the tacky soil indigenous to the area, the Red River Valley Speedway remained as one of the fastest half-mile, dirt tracks in America. In addition, the track was easily accessible to fans and competitors flocking to the track from the west via Interstate 94, which connected Fargo with Bismarck to the west and Minneapolis to the east. The track, built outside of Fargo city limits in the small suburban enclave of West Fargo, initially rested far beyond development. As suburbia crept closer to the track in the 1970s, the Red River Valley fair board purchased surrounding land to keep noise contained on its property.

[23] Fargo and its sister city of Moorhead, Minnesota, and Grand Forks, North Dakota, and East Grand Forks, Minnesota, are the largest metropolises in the Red River Valley region. "Last Valley Fair at Old Grounds Draws Total Attendance of 98,659," *Fargo Forum*, 16 July 1966; Phil Roberts, "The Sun Sets at Sunset," *Stock Car Racing*, September 2000, 78-81; Olsen, "Things Have Changed." As was the case nationwide, most dirt track racing, by the 1960s, took place at night, and temporary lights were installed for evening races at the Fargo fairgrounds. A high school, strip mall, McDonalds, and North Dakota State University apartments exist at the old site.

Fargo sustained another raceway in the late 1960s. Fargo Speedway Park was successful during its short tenure from 1965 until 1971 and occupied open farmland a few miles south of downtown. However, this property also existed at the southwestern intersection of newly constructed Interstates 94 and 29. Before the interstates, most of Fargo's population was confined northeast of the intersection. I-94 and I-29 stimulated major commercial and residential development south and west of downtown. After World War II, family farms and small communities disappeared at the expense of corporate agriculture and unstable crop prices, and rural families resettled in cities, such as Grand Forks, Bismarck, and Fargo. North Dakota's rural population migrated toward suburban quarters, thus bucking the national flow from the cities to suburbs. Indeed, bulldozers were busy in Fargo during the late 1960s and early 1970s, and the farmer who owned the land could not pass up the financial incentives of investors. Housing and commerce eventually covered the former location of Fargo Speedway Park as the city grew in a southerly direction. Thus, even in North Dakota, development surrounded and engulfed a once rural racing facility.[24]

The development of the Red River Valley Speedway and Fargo Speedway Park's demise also illustrated the vital connection between interstate highways and racetracks. Many years before the Interstate Highway Act of 1956, local, state, and federal officials and the American public saw the need for massive highway improvements and the necessity of an interstate network to not only accommodate more automobiles and trucks, but rescue an aging, overburdened, and obsolete road network. The federal government also foresaw the Interstate Highway System as an offensive and defensive measure of Cold War security, and President

[24] "Grand Opening Fargo Speedway Park," *Fargo Forum,* 2 July 1965; "Stock Car Drivers Open Program," *Fargo Forum,* 17 August 1967; "Don Mack Wins Feature," *Fargo Forum,* 19 August 1967; "Stars of IMCA's 'A' Racing Programs This Week at RRV Fair," *Fargo Forum,* 20 August 1967; "World Record Shattered in 100-Lap Stock Car Race," *Fargo Forum,* 25 August 1967.

Dwight Eisenhower intended for the interstates to have two major strategic goals. One, the interstates would provide urban residents speedy escape routes and facilitate mass withdrawals from cities in the event of a Soviet missile attack. Mobile defense was the other envisioned purpose of the Interstate Highway System; missile-strapped American trucks could roam the interstates, thus keeping Soviet surveillance continuously trying to keep up with a mobile nuclear arsenal.[25]

The federal government funded 90 percent of the massive project; the states allocated the remaining 10 percent. Federal planners compiled a massive report that dictated where the new interstates would be constructed, and the all-important "yellow book" held the destinies of countless cities and communities. It delighted civic boosters, particularly from small- to mid-sized towns, to learn that one of the proposed superhighways would proceed through or near their community. Although no one likely realized this at the time, buried within the yellow book's pages were the short- and long-term fates of countless racetracks. The report would influence where future racetracks would be constructed (and bulldozed). Today, countless speedways of all sizes and configurations remain visible from interstates.[26]

Interstates sometimes benefited tracks because once-remote venues became more easily accessible, thus generating more fans and competitors from farther distances. Racers—bound for Red River Valley Speedway for example—welcomed interstates because the new four-lane expressways certainly made transportation of their racecars and haulers easier and quicker.

There was a flip-side, however. Landscapes, once considered "the country," became towns and suburbs. With interstate construction came residential and commercial development, which

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[25] A thorough account of the events leading up to the Interstate Act is, Mark H. Rose, *Interstate: Express Highway Politics, 1941-1956* (Lawrence: University of Kansas Press, 1979).

[26] Lewis, *Divided Highways,* Richard O. Davies, ed. *The Age of Asphalt: The Automobile, the Freeway, and the Condition of Metropolitan America* (New York: J.B. Lippincott, 1975).

led to increased land values in rural areas. Home ownership was a defining feature of American society in the 1950s and 60s—a house in the American suburbs signified personal and national success. Housing, commerce, and industry replaced forests, farms, and speedways. As sprawl webbed across America, small racetracks such as Fargo Speedway Park disappeared.[27]

Expanding suburbs and existing speedways were incompatible, and automobile racing died a slow death in some parts of the United States. Pavement's impact on racing reached beyond track surfaces to another intimate level. Heavily traveled interstates in the Northeast contributed to rapid suburban development along the I-95 corridor (Boston, Providence, New Haven, New York, Trenton, Philadelphia, Baltimore, and Washington, D.C.). With the paving of tracks came the paving of landscape, and the Northeast region, as a whole, went asphalt and concrete sooner than the South or Midwest. Two long-time USAC championship tracks—Trenton Speedway at the New Jersey State fairgrounds (1957), and a few miles away, the long-time venue at Langhorne, Pennsylvania (1965)—were prominent examples. For the time being, the tracks survived as the black interstate ribbon and other highways continued to deliver fans.[28]

Still, rapidly suburbanizing states such as Massachusetts, Connecticut, New Jersey, and eastern Maryland tended to spawn a rapid closure of racing facilities. The Northeast region had a high number of speedway closures and paveovers. The 1960s foreshadowed the fate of racing in many parts of the country, as clashes between racing enthusiasts and the citizenry increased. For instance, Maryland's Beltsville Speedway, a half-mile paved oval located near the

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[27] Thomas J. Sugrue, *The Origins of the Urban Crisis: Race and Inequality in Post War Detroit* (Princeton, NJ: Princeton University Press, 199); Cohen, *A Consumer's Republic A Consumer's Republic: The Politics of Mass Consumption in Postwar America* (New York: Vintage, 2003); Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985).

[28] Skip Clayton, "Trenton Speedway," *Open Wheel*, December 1987, 48-51; Ernie Saxton, "Langhorne 100 Miler to Jim McElreath," *Illustrated Speedway News*, 22 June 1965, 1, 15; Ernie Saxton, "Gordon Johncock wins Langhorne '150'," *Illustrated Speedway News*, 25 June 1968, 1; "All Star Indy Field to Vie in Trenton," *Illustrated Speedway News*, 9 April, 1963, 5; O'Reilly, "Racing the Stocks."

Baltimore-Washington Parkway (Highway 301) and Interstate 95, opened in 1965. The population of Prince George's County jumped from 357,395 in 1960, to 661,719, ten years later. To be sure, the track was doomed before its first race. Complaints about noise, traffic, and lewd-behavior converged on the track soon after it opened.[29]

The fate of Marlboro Speedway, also located in Prince George's County, was more immediate. Built in the 1950s, Marlboro was a multi-purpose facility that featured a dirt oval, paved oval, and flat 1.7-mile, nine-turn, road course. It was the favorite of the Beltway's strong sports car base. Initially, geologic factors benefited Marlboro. The facility was safe from residential and commercial development because the track site existed on a high water table—land unsuited for building construction. Then, in the mid-1960s, as sprawl drew near, a growing public outcry of forty-four citizens complained to the Prince George's County Commission and forced Marlboro Speedway to limit evening racing, restrict practice runs to the daytime, and establish curfews of 11:30 p. m. Evening racing was permitted only on Fridays, Saturdays, and during special events. Still, the population crept closer to the speedway and civilian complaints increased, and by 1969, the track was no longer used for organized motorsports.[30]

Automobile racing turned into a sport characterized by survival and adaptation. Marlboro's closure partially led to the construction of Summit Point Raceway in West Virginia. Located near the small cities of Charles Town, West Virginia, and Winchester, Virginia, this facility was easily accessible from Washington, D. C., via Interstate 66. Beginning in 1969, this new facility—which still exists today—served the mid-Atlantic sports car racing contingent. In a

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[29] "NASCAR Races Feature First Program at Baltimore-Washington Speedway," *Washington Post*, 20 July 1965; David Bourdon, "Beltsville Prospers Despite Mounting Problems," *Washington Post*, 15 July 1969.

[30] The site remained utilized for other non-racing events. Venlo Wolfsohn, interview by author, 13 March 2007, Bethesda, Maryland, in possession of author.

similar vein as Watkins Glen and Elkhart Lake, Summit Point—nestled in the Appalachian foothills in the midst of apple-orchard country—mixed automobiles with aesthetics.[31]

Road racing spread into "NASCAR country" during the late 1950s and 1960s. Virginia International Raceway, opened in 1957, was one of the first southern road courses. Six years later, Augusta International Raceway, a European-style road course carved in the middle of cotton country in an area most famous for the prestigious Masters golf tournament, opened in 1963. This facility was fan-friendly; a *NASCAR Newsletter* mentioned that "unlike other road courses, it is possible to see virtually every inch of the Augusta track from the major spectator area, which is located on a hill and overlooks a valley through which the racetrack winds around the golf course."[32] The three-mile road course consisted of twenty-one turns. The complex also had a half-mile dirt oval (built in 1960, paved in 1964), and a 4,200-foot drag strip/runway. Road racing's appeal was increasing in the Deep South, and additional southern road-courses would be built in the 1970s and beyond.[33]

The South, as a matter of fact, was home to America's first Formula One race. In 1959, the world's most prestigious racing series traveled to Sebring, Florida, for the inaugural United States Grand Prix. Located on the shore of Lake Jackson, Sebring lies in a remote, orange-growing region of south-central Florida known as "ridge-country." A former military airport, Sebring International Raceway became famous in racing circles for its insects, intense heat, and

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[31] Wolfsohn, interview by author.

[32] The track was located in Hephzibah, Georgia, about ten miles southwest of Augusta. Johnny Hendrix, "Augusta Road Course to Open '64 Season," *NASCAR Newsletter*, 15 October 1963, 3; Dic Fan der Veen, "Inaugural at Augusta," *US Motorsports*, April 1964, 23-24; Eric Warner, "First USRRC Race for '64," *US Motorsports*, June 1964, 50-53.

[33] The road circuit began holding races three years after the dirt oval.

lack of amenities. Many racers and their teams test at the facility during winter, and Sebring's longevity was due to its geography.[34]

Despite the growth of all types of racing in Florida, stock car racing became, by far, the state's most popular form of motorsport. In 1948, Bill France brought sanctioned racing back to Daytona Beach, and 14,000 people attended the first NASCAR modified-stock car race (which preceded the first Grand National race on the beach by one year). The course consisted of the beach and part of coastal highway A-1-A, and through 1958, it was one of the biggest events on the Grand National calendar and attracted drivers from all parts of the country. The races marked the end of one era (beach) and the beginning of another (pavement). Aware that the city's growth threatened the event, France started investigating the possibility of constructing a permanent multi-purpose racing facility to serve as the stock car-racing equivalent to the championship car track at Indianapolis.[35]

A 345-acre rattlesnake-infested parcel of scrub land—adjacent to the city's municipal airport and within a mile east of the forthcoming Interstate 95—provided the suitable location. The longstanding runways proved asphalt's durability on the topography, and although natural beach sand was no longer raced upon, geologic forces made the construction of Daytona International Speedway possible. The occurrence of natural marl (clay, sand, seashell mixture) found in the soil allowed for the construction of the track's 31-degree banking. The tri-oval section of the track was built to conform to the bend in nearby state highway 92. In 1959, the

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[34] The second United States Grand Prix was held at Riverside in 1960 before moving to a long-term home at Watkins Glen the following year. Bill Oursler, "50 Years at Sebring," *National Speed Sport News*, 13 March 2002, 30-31; Adam Cooper, "Spirit of 59," *Racer*, December 1999, 60-62; Shav Glick, "It's Almost Like Old times once again at Sebring," *Los Angeles Times*, 18 March 1978.

[35] "The Boss of the Beach," *Speed Age*, April 1948, 14-15, 25; Mark Rene, "Daytona Rides Again – With NASCAR," *Speed Age*, March 1951, 30-32; Houston A. Lawing, "South vs. Mid-West Duel at Daytona in Coming Classics," *National Speed Sport News*, 31 January 1951, 5.

Daytona International Speedway replaced the beachfront as the nerve center for American stock car racing.[36]

This configuration made possible the highest stock car speeds ever witnessed on a closed facility, and the 2.5-mile superspeedway provided yet another challenge for drivers and mechanics. The tri-oval configuration and high banks allowed for faster speeds because the turns were not as tight, and a driver did not necessarily have to use his or her breaks or step off the accelerator to navigate the turn successfully. (Despite the long straightaways of the "true" oval configuration at the Brickyard, smaller embankments and tighter turns at Indy kept corner speeds in check.) The championship cars' Offenhauser engines were too powerful and ill-suited for the superspeedway. The banking of the track promoted blistering open-wheel speeds not seen since the board track era. In February 1959, two-time AAA stock car division champion Marshall Teague fatally crashed while testing his car at the track for a scheduled USAC championship race later that April (the first championship race in Florida since Fulford-Miami in 1926). Despite the obvious danger presented by the blinding speeds, plans still went ahead for the event, won by Jim Rathmann. A second tragedy occurred, however, when George Amick crashed and died during the race. The USAC Daytona 200 was the only championship race held at the superspeedway, illustrating that some types of racing were becoming too fast.[37]

The construction of Daytona International Speedway in 1959 kicked off the third American superspeedway boom, and paved superspeedways became NASCAR's most popular tracks and largest draws. The Daytona 500—first held on February 22, 1959—emerged as NASCAR's biggest race of the Grand National season. The race took place in winter and permitted drivers

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[36] Rob Sneddon, "A Flying Start with a Photo Finish," *Stock Car Racing,* February 2000, 28-42.

[37] L. Spencer Riggs, "Marshall Teague," *Stock Car Racing,* July 1986, 82-87; Rob Sneddon, "A Flying Start with A Photo Finish," *Speedway Illustrated,* February 2008, 28-42.

from all over the country to tow their racecars and venture southward to the speedway via I-95. The timing of this event was unique in relation to most team sports. In NASCAR's case, the season's most prestigious and lucrative event occurred at the beginning, not end, of the season.

In contrast to the major speedways built nationwide in the 1910s and 20s to accommodate AAA championship racing, this track-building boom was regional and predominately benefitted Grand National stock car racing. The construction of these new venues usually meant one less event for northern short tracks, and with more superspeedways came fewer dirt races. In comparison with the previous decade, NASCAR's Grand National division staged fewer races in the North during the 1960s, with Northeastern trips mainly limited to one mid-summer tour. Maine, New York, and New Jersey hosted Grand National races. The non-southern events were usually well attended, but these smaller facilities did not have the seating capacity of the new southern superspeedways.[38]

NASCAR's top division reflected the nationwide growth of asphalt racing, and the Grand National Series gradually shifted to pavement. From 1949 to 1959, the annual schedule featured a majority of dirt races. An equal number of dirt and paved events occurred in 1960 and 61, but beginning with the 1962 season, asphalt races outnumbered dirt races. This trend continued throughout the decade. [39]

As the rapid success of Daytona and Darlington indicated, the Southeast was becoming an ideal region for successful large automobile racing facilities. Daytona kicked off an era. One-and-a-half-mile tri-ovals at Atlanta (Hampton) and Charlotte (Concord) debuted in 1960. Additional, and still surviving, Southeastern superspeedways roared to life in rural Rockingham,

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[38] "Outlook of the Northeast," *NASCAR Newsletter*, 1 March 1968, 2; Rob Fisher, "Wall Stadium Speedway," *Stock Car Racing*, September 2006, 50-56. Wright, *Fixin to Git!* 180-203.

[39] Gene Granger, "Doin' It in the Dirt," *Grand National Illustrated*, November 1984, 46-60; Andy Fusco and Pete Hollebrand, "When Grand Nationals Ran Sideways," *Stock Car Racing*, February 1978, 60-63, 70.

North Carolina, (1966) and Talladega, Alabama (1969). When the Sunbelt boom came to the region in subsequent decades, these tracks remained safe, because they were far away from development, became national-known sporting venues, and generated enormous economic benefits to these towns and their surrounding communities. Constructed on inexpensive, rural land close to interstates but easily accessible to growing southern cities, they were built to ensure longevity.[40]

Constructed on a former soybean farm in rural, northeastern Alabama, Talladega Superspeedway was outside major suburban development but ideally located along Interstate 20. This superhighway traversed the South from Texas to South Carolina, and connected Atlanta and Birmingham, two of the region's fastest-growing major cities with plenty of racing fans. The track had a tumultuous beginning; just as was the case ten years earlier when Daytona was found to be ill-suited for championship cars, Talladega tested the limits of the Grand National stock cars. The track was slightly longer, higher-banked, and faster than Daytona. Many Grand National drivers feared their racing tires would not hold to the rigors of the freshly paved surface for the scheduled 500-mile opener and boycotted the September 1969 event. The race took place—but absent from the field were nearly all of the top Grand National drivers. The boycott showed that even the bravest of racers, too, had their limits to how fast they were willing to go. The construction of Talladega served as a benchmark event in motorsports technology and signaled the end of the long-standing trend to build longer speedways with steeper bankings. Large tri-oval facilities fostered such blistering speeds that sanctioning bodies were presented with the challenge of how to slow the cars down. No oval raceway has been built since that is

[40] "Charlotte Winner to Get Over $25,000," *NASCAR Newsletter,* 1 May 1962, 1, 3; "Paving Started on New N.C. Speedway," *Illustrated Speedway News,* 10 August 1965, 11; "American 500 North Carolina Motor Speedway Inaugural," *Stock Car Racing,* May 1966, 32-41; A.R.C.A. 500-Miler Scheduled for new Alabama Speedway," *Illustrated Speedway News,* 3 December 1968, 4; "Daytona and Alabama to Operate under I.S.C." *Illustrated Speedway News,* 3 December 1968, 7; Shackleford, "Going National while Staying Southern."

longer and faster than Talladega's mammoth 2.66-mile, lightning-quick track. The 33-degree-banked tri-oval remained the largest oval speedway in America.[41]

American auto racing became more regionally defined during the 1960s. With NASCAR-sanctioned stock car racing entrenched in the Southeast, USAC's stock car and open-wheel divisions remained prominent in the Midwest. In southern California, NHRA-sanctioned drag racing catapulted this type of motorsport to the rest of the nation. "Sunny" California also became one of the most popular road racing states. The IMCA sprint and stock car divisions were most popular in the Great Plains states, such as Nebraska and the Dakotas, and further east in Iowa, Missouri, Wisconsin, and Minnesota. All types of racing subsisted in the Northeast; Formula One found a home at Watkins Glen, championship racing thrived at Langhorne and Trenton, and NASCAR Grand National visited smaller northern short tracks. During the 1960s, stability characterized American auto racing and motorsports entities, but those days were numbered. Heading into the 1970s and 80s, the development and demise of these entities and their respective varieties of racing became more contingent on geographic and social forces.[42]

As the checkered flag signaled the end of the 1960s, countless post-World War II short tracks disappeared from the countryside due to sprawl and interstate construction. In the decades ahead, environmental factors dictated which motorsports entities would strengthen, weaken, emerge, or disappear. In previous decades, with the absence of "barriers," such as noise statutes and environmental impact studies, building a racetrack and hosting automobile races required

[41] Jeff Frederick, "'If it weren't for Bad Luck I'd have No Luck at all': NASCAR, Southern Boosterism, and Deep South Culture in Talladega, Alabama," *Gulf South Historical Review* 20 (Spring 2005): 6–36. Bob Carey, "The Talladega Flap Goes On," *Stock Car Racing*, January 1970, 16-19; Bones Bourcier and Greg Fielden, "Talladega '69: The Race That Almost Wasn't," *Speedway Illustrated*, November 2004, 31-39.

[42] The IMCA also instituted a midget (compact) division from 1962-1969. John S. Radosta, "U.S. Auto Racing: A Guide Through the Maze," *New York Times*, 4 February 1968.

little more than an investment and promotion skills. In the 1970s and 80s, those days verged on nostalgia.

CHAPTER 6
RESURGENCE AND INSURGENCE, (1970-1979)

> At that time, nobody paid much attention to NASCAR. It had the redneck image. It was popular in the Southeast, but for most of the Northern people, the serious racing was considered to be what ran at Indianapolis, the champ cars.
>
> —*Larry Mattingly*[1]

> It looks like 1979 will be the greatest year ever for Grand National stock car racing . . . and it could be a season that will change the course of the sport's history.
>
> —*Humpy Wheeler*[2]

American auto racing's modern era emerged in the 1970s. USAC, NASCAR, the IMCA, the SCCA, and IMSA had the largest shares of the American racing market at the beginning of the decade. USAC and NASCAR remained the major oval-track national organizations. USAC controlled the eastern Heartland, and NASCAR dominated the Southeast. The IMCA brought stock and sprint car racing to smaller and mid-sized locales, but America's oldest motorsports entity faded and disappeared by 1977. After a brief opening season in 1969, IMSA strengthened and challenged the SCCA as the top professional American road racing series. The "decade of change" was a turbulent period for sanctioning bodies and speedways. This chapter explores the influence of politics, economy, and geography on motorsports development in 1970s.[3]

In 1970, USAC was robust and commanding. Outside of the Southeast the Championship series reigned as the premier American auto racing division. That year, 84 entries vied for 33 available Indianapolis 500 starting positions. The biggest stars in American motorsports, such as

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[1] Sam Ross Jr., "Racing Against Time," *Pittsburgh Tribune-Review,* 6 August 2006. Mattingly has been associated with auto racing in western Pennsylvania since the 1960s

[2] "Stock Car Racing Headed for Greatest Season," *Illustrated Speedway News,* 24 January 1979, 14. Wheeler was long-time president of Charlotte Motor Speedway until 2008.

[3] Shav Glick, "Drag Racing 1972: Big Business," *Los Angeles Times,* 17 November 1972; "1976—a Banner Year for Racing Attendance," *Auto Racing Digest,* May 1977, 48-9; "Auto Racing Holds No 1 Rank among Non-Betting U.S. Sports Goers," *National Speed Sport News,* 2 April 1975, 9; "Chicago Fireworks Expected as SCCA Delegates Convene," *National Speed Sport News,* 21 February 1979, 6.

A. J. Foyt, Mario Andretti, and Bobby and Al Unser, drove in the USAC championship series and also succeeded in selected NASACAR events (Andretti won the 1967 and Foyt won the 1972 Daytona 500s). The Indy 500 remained the world's premier auto race and drivers from all types of American racing—including southern-born NASCAR stars, such as Lee Roy Yarbrough, Cale Yarborough, and Bobby and Donnie Allison—crossed over and competed in the world's largest annual sporting event.[4]

Although Indy remained strong, USAC and motorsports entities faced financial and geographical obstacles during the 1970s. Auto racing's plight reflected larger socioeconomic trends. Inflation, higher gasoline prices, and a slumping American economy contributed to smaller fields and lower purses at many racetracks. American motorsports became more expensive at all levels, and rising competition costs weakened USAC-sanctioned championship racing during the decade. Despite the high prices of chassis, components, and tires, engine costs hurt teams the most. The four-cylinder Offenhauser engines were expensive, but modern and more powerful turbocharged V-8 powerplants from Detroit carried much higher price tags. Ultimately, the outdated Offy faded from championship racing after nearly 60 years.[5]

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[4] Pat Santello, interview by author, 6 February 2007, Titusville, Florida, in possession of author; "84 Entries for Indy 500," *Illustrated Speedway News*, 21 April 1970, 20; "Record Breaking Entry List of 92 Cars for Indy 500 May 28," *Illustrated Speedway News*, 25 April 1978, 11; Ed Wrenn, "A Closer Look at USAC Championship Car Racing," *National Speed Sport News*, 14 May 1970, 16; "200,000 to Watch '500' Qualifying," *Washington Post*, 10 May 1970; Bill Dimmich, "Is Championship Racing Suffering From Nation's Economy Bind?" *Illustrated Speedway News*, 10 December 1974, 5; "USAC Champ Circuit Problems: Fuel, Sponsors, and AJ Foyt," *Illustrated Speedway News*, 2 April 1974, 8; Reynold C. MacDonald, "Open Letter," *1974 USAC Yearbook;* Ron Mentus, "Once Upon a Time . . . What's Happening to USAC Champ Car Racing?" *Auto Racing Monthly*, December 1974; Phil Harms, "USAC Champ Circuit Problems: Fuel, Sponsors and A.J. Foyt," *Illustrated Speedway News*, 2 April 74, 8; Joe Casey, "Firestone Withdrawal a Bombshell to Teams," *National Speed Sport News*, 14 August 1974, 8; "Firestone May Spell Finis to Racing," *National Speed Sport News*, 14 August 1974, 3, 12; "Michigan Boycott off, USAC Placates Owners," *National Speed Sport News*, 17 July 1974, 5.

[5] Peter Thomas, "Indy 500," *Stock Car Racing*, September 1968, 28,-35, 56; John S. Radosta, "Auto Racing and the Marketplace," *New York Times*, 14 October 1971, 57; "Spiraling Costs Offer New Challenge to Auto Racing," *Illustrated Speedway News*, 5 November 1974, 12; Mullin, interview by author; Jep Cadou, "Is Death Knell for Offy Being Sounded?" *National Speed Sport News*, 23 August 1978, 3, 27; "Foyt Rallies to Win Texas 200; Offy Teams in 'Slowdown' Protest," *National Speed Sport News*, 9 August 1978, 3, 19; Len Milde, "It Seems to Me,"

Dollars equaled speed, with corporate sponsorship essential to success. The high price of championship racing eventually drove small-time car owners, such as Pat Santello, out of the sport. Santello (whose rookie driver Lee Kunzman placed seventh in his inaugural Indianapolis 500 in 1977), represented a dying breed—independent and underfunded owners and racers, who competed for sheer enjoyment and always "scraped by" to participate. Yet by the end of the decade, many of these passionate small-time racers and owners with dreams bigger than pockets were deep simply could not compete with well-funded teams. Still, the high price of championship racing was only one area of contention within USAC. [6]

Political in-fighting also changed championship racing in the 1970s. Shortly after long-time Indianapolis Motor Speedway president and USAC head Tony Hulman died in 1977, factions intensified in the championship division of USAC. Tragedy worsened an already unstable situation after a 1978 plane crash took the lives of seven top-ranking USAC officials. Then, in 1979, came championship racing's biggest blow. In brief, numerous championship teams split from USAC and formed Championship Auto Racing Teams (CART), a consequence of long-standing feuds between drivers, owners, and officials over competition rules, television packages, and sanctioning fees. That year, two championship-style open-wheel racing series co-existed with separate schedules. Yet, most of the top drivers drifted over to CART. Once championship racing splintered, its fan base weakened.[7]

Illustrated Speedway News, 11 October 1977, 9; George Cunningham, "The High Costs of Running a Team," *Auto Racing Digest,* November 1977, 52-55.

[6] Santello, interview by author; Mullin, interview by author; "Drake V-8 Cosworth Challenge Put off by Indianapolis Weather," *National Speed Sport News,* 17 May 1978, 31; Carl Hungess, "USAC is a Soap Opera," *National Speed Sport News,* 23 August 1978, 2, 16; Derek Lewin, "The End of the Offy," *Open Wheel,* October 1998, 94.

[7] This is a very abbreviated account of the complex USAC/CART split. For additional information, see *1979 USAC Yearbook;* Venlo Wolfsohn, "Drivers Protest 4-Cylinder Bias," *Washington Post,* 13 August 1978. "USAC Rejects Bid to Govern Champ Division," *Illustrated Speedway News,* 22 November 1978, 3; Robin Miller, "USAC Championship Division Bolted by New CART Group," *Illustrated Speedway News,* 29 November 1978, 3; "USAC

Nine years before the split, an optimistic USAC billed auto racing as the "sport of the seventies." The media also sensed that auto racing verged on mainstream popularity in a similar vein as baseball, football, and basketball.[8] As long-time *Los Angeles Times* motorsports writer Shav Glick put it:

> Auto racing nearly burst its buttons in pride when race drivers were guests of the president [In 1971, Nixon hosted racecar drivers from numerous entities at the White House]. In a manner of speaking, it came out of the closet, or the garage, into the living room of the family of sports.[9]

The new Ontario Speedway generated USAC's excitement, and the entity billed the track as the "Indianapolis of the West" for "the sport of the seventies." Completed in 1970, and constructed on the site of a former vineyard 40 miles east of Los Angeles, the 2.5-mile superspeedway was the most anticipated (and hyped) project built in USAC's history. California Governor Ronald Reagan attended the inaugural event on September 6, and over 170,000 fans watched Jim McElreath prevail in the 500-mile race. The crowd showed that Ontario was USAC's biggest event next to the annual Indianapolis 500.[10]

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to Run Big Schedule—Dick King," *Illustrated Speedway News*, 28 December 1978, 3; "CART sets up Working Agreement with SCCA," *Illustrated Speedway News*, 28 December 1978, 3; Jep Cadou, "Foyt Returns to USAC Fold, Charges CART Lied," *National Speed Sport News*, 7 February 1979, 3, 13; Chris Economaki and Bill Oursler, "USAC is On Offense," *National Speed Sport News*, 14 February 1979, 5, 30; Chris Economaki and Bill Oursler, "Major Obstacle to CART-USAC Peace Removed," *National Speed Sport News*, 28 February 1979, 3; Chris Economaki and Bill Oursler, "Penske Offers Performance Bond," *National Speed Sport News*, 25 April 1979, 3, 29; "More Fuel for Offies, USAC Owners Petition," *National Speed Sport News*, 17 August 1977, 3, 20; Jep Cadou, "Ban a Shock to CART," *National Speed Sport News*, 25 April 1979, 3, 18. The primary document written in 1978 by car owner Dan Gurney, known as the "white paper," which explains the genesis of CART can be found in Ned Wicker, "In the Beginning," *Indy Car and Championship Racing*, January 1999, 33-35.

[8] Johnny McDonald, "Ontario Motor Speedway," *USAC '70*, September 1970, 8-9; Deke Houlgate, "Western World," *Stock Car Racing*, July 1972, 12-13.

[9] Clyde Bolton, "President Nixon Receives Racers," *NASCAR Newsletter*, 1 October 1971, 1, 4; "USAC at the White House," *USAC '72*, May 1972, 31; Shav Glick, "Motor Racing 1980: A Minus Big O," *Los Angeles Times*, 25 December 1980.

[10] "Build Giant Race Track in California," *Chicago Tribune*, 22 February 1970; John S. Radosta, "Pollard is Loser in Last-Lap Duel," *New York Times*, 7 September 1970; Shav Glick, "Ontario Track Racing Toward Early Grave," *Los Angeles Times*, 24 July 1981.

The facility stood in between the Haven and Milliken exits on I-10, and close to the I-15 interchange. Envisioned to benefit from nearby Orange County airport and boost Ontario and surrounding San Bernardino County, the track was in one America's most rapidly growing regions. As the 1970s progressed, the "Indianapolis of the West" continued to draw sizeable crowds and put on exciting races, while accumulating massive debt. The track's days were numbered, paralleling the USAC Championship series.[11]

Stalwart northeastern USAC tracks at Langhorne and Trenton succumbed to development as sprawl, too, indirectly contributed to the decline of championship racing. Built in 1926, and known initially as the New Philadelphia Speedway, Langhorne occupied 89-acres of wooded land about 30 miles north of Philadelphia and 10 miles south of Trenton. The one-mile circular track, which existed above underground springs, was the longest-lasting dirt facility built specifically for championship automobile racing, putting on USAC's first championship dirt race in 1956. It was a dry and dusty facility, typical of most northeastern tracks where the soil less resembled the red-clay-rich dirt of the South or nutrient-rich black dirt of the Heartland. Long-time *National Speed Sport News* correspondent Gary London commented:

> It was a weird place, saucer-shaped, a mile in distance and covered with oily dark clay. It had ruts sometimes as big as Cleveland. There was an area called "puke hollow" because drivers felt they could toss their cookies when they drove over it.[12]

Langhorne's natural surface lasted through the 1964 season. The track was paved, lengthened to 1.5 miles, and reconfigured as a D-shaped track the following year to accommodate the growth of championship racing on asphalt. In 1971, Langhorne held its last

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[11] Henry Manney, "Move Over Indianapolis Here Comes Ontario," *Los Angeles Times*, 16 August 1970; Ann Frank, "Ontario Motor Speedway May Rival Famed Indianapolis Track," *Los Angeles Times*, 10 June 1970; Bob Thomas, "Auto Racing Leaders Attend Ontario Track Groundbreaking," *Los Angeles Times*, 25 September 1968; Shav Glick, "Ontario Speedway: A Change in Atmosphere," *Los Angeles Times*, 24 August 1971.

[12] Gary London, "Notorious Langhorne Worth Remembering," *National Speed Sport News*, 31 October 2007, 13.

championship race. Its northern Bucks County location, between Trenton and Philadelphia, stood in the way of suburban growth, and speedway land proved to be too valuable. In later years, past competitors and spectators spoke fondly of the track, which was replaced by a shopping mall.[13]

Sprawl also helped kill Trenton speedway. The loss of this second major long-time venue further weakened championship racing in the Northeast. The facility opened with races on its half-mile dirt surface in the early 1900s. In 1946, its owners expanded the course to a one-mile mile oval, and in 1957 they paved it. Lengthened and reconfigured to form a peanut-shaped 1.5-mile oval, in 1969, Trenton became a one-of-kind racetrack. Its configuration—a unique oval and road-course combination—created a demanding and challenging speedway. Throughout the 1960s and 1970s, Trenton was USAC's major Northeastern venue (from 1962 to 1966 Trenton scheduled three championship races per season). Trenton's last championship car race, a CART event, was in 1980. The city of Trenton and its network of suburbs (including Langhorne) underwent rapid development, with interstates 95 and 295 connecting commuters to Philadelphia. Although historically other forms of racing (including Grand National) occurred at these facilities, the losses of Trenton and Langhorne hurt championship racing most severely.[14]

During the 1970s, many tracks were not merely encroached upon, but engulfed by development. The fates of Langhorne and Trenton—two high-profile examples—indicated how commercial and residential land use continued to become a larger factor in the development and

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[13] "Langhorne will Open May 11th," *Speed Age*, May 1947, 23; Russ Catlin, "The Saga of Langhorne," *Speed Age*, January 1951, 18-25; *Milwaukee Race Program*, 9 June 1971; *Langhorne Race Program*, 24 June 1956; Wolfsohn interview by author.

[14] Venlo Wolfsohn, "Trenton Speedway Lengthened for Sunday's Race," *Washington Post*, 24 April 1969; Skip Clayton, "Trenton Speedway," *Open Wheel*, December 1987, 48-51; "Trenton Future in Doubt," *National Speed Sport News*, 27 August 1980, 3; "Judge Postpones Making Decision," *National Speed Sport News*, 1 October 1980, 2; "Trenton Rejuvenation Plans Call for Racing, Fair, Music," *National Speed Sport News*, 26 January 1981, 3; "USAC Dirt Track Race at Syracuse July 1st," *Illustrated Speedway News*, 20 June 1978, 2.

survival of American racetracks. In the 1950s and 60s, sprawl shut down speedways, particularly in southern California, eastern Maryland, and northern New Jersey—booming areas considered most vital to interstate construction. In the 1970s, the rest of the nation caught up with these places and more tracks disappeared. Owners of track-occupied real estate often became well-to-do once residential and commercial developers made lucrative offers. This trend escalated in the 1970s, as track owners sold out for cash. Although many were racing aficionados and worked tirelessly to protect their investment, they soon realized that the land was worth more than auto racing (or agriculture). Residential and commercial development of speedway-occupied land almost always fetched a high price, and countless tracks stood directly in the path of bulldozers.[15]

Sprawl greatly affected motorsports in Florida during the 1970s. The state's morphing communities moved inward from the coasts, claiming both wilderness and racetracks. In the 1970s, short tracks disappeared at Fort Pierce, Eau Gallie, Vero Beach, and North Fort Myers. Tracks located near Jacksonville, Naples, and Miami also had little remaining time before their inevitable demise. However, the most far-reaching example of Florida sprawl's adverse effect on motorsports occurred at Tampa. Attendance often eclipsed 8,000 fans at the popular Plant Field fair track, which welcomed IMCA and regional competition throughout the mid-1970s. Plant Field remained as the season-opening venue for many Midwestern and Northeastern open-wheel racers. A great February IMCA tradition ceased in 1975 after the Tampa track held its last races. University of Tampa buildings now stand on the site of the former winter capital of

[15] *Pocono True Value 500 Official Program,* 1980.

American dirt track racing, a victim of collegiate sprawl. It is hard today to fathom that one of America's greatest dirt tracks once stood in the middle of bustling Tampa.[16]

Fairground tracks survived in small towns, or on non-developed land far beyond the edges of city limits. Fair facilities were often used during the summer months for motorsports, yet IMCA auto racing was slowly dying at the annual agricultural fair. Beginning in the late 1960s, and continuing into the 1970s, smaller communities and fair boards, more often than not, accommodated racing at the local level, which prevented the necessity of racing being brought in by the IMCA during fair week. For instance, Fargo, North Dakota, was one of countless fair cities that phased IMCA-sanctioned motorsports out of featured activities at the agricultural fair. As the 1970s unfolded, the IMCA slowly went out of business.

A major cause of the IMCA's decline was its failure to expand beyond its fan base. The oldest American racing entity had remained an organization dependent primarily on agricultural expositions. The growth of grassroots and local competition made the fair circuit and yearly fair racing unnecessary. The essence of the agricultural fair started to change too; some state and county fairs phased auto racing out in the 1970s in favor of the broader appeal of rock and country music concerts. America's rustic connection with agrarian America declined throughout the country, and the age-old tradition of racing at the annual agricultural fair waned in the modern era. In existence for over 60 years, the end of the IMCA concluded a major phase of American racing history.[17]

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[16] *1962 I.M.C.A. Yearbook;* Bob Smith, "Barton-McCune & Woolley Start in Florida Fair Series," *Illustrated Speedway News,* 9 February 1965, 2. *Official Program Florida State Fair,* February 1968; Bill Daniel, "Florida Sprints: IMCA Style," *Stock Car Racing,* June 1970, 46-47; "Winter National Sprints to get Underway Wednesday," *Illustrated Speedway News,* 29 January 1974, 6.

[17] For a good overview on the differences between racing on dirt and paved surfaces, see Jeff Huneycutt, "Dirt vs. Asphalt," *Stock Car Racing,* April 2006, 18-26. Jeff Olson, "Rural Legend Revival," *Racer,* April 2000, 82; Jim Myers, "Dirt Tracks Pave Way For Racing Life," *USA Today,* 13 March 1989; Holder, "Doing it on Dirt," David Thompson, "Kickin' up Dirt and Puttin' Down Roots: Keith Simmons and NASCAR's Dodge Weekly Racing

As mentioned earlier, USAC underwent internal and external strife throughout the 1970s. In the late 1960s, the USAC administrative hierarchy became increasingly composed of European-style, road-racing proponents. This, in part, led to the decision to cease championship dirt races after the 1970 season.[18] Open-wheel dirt and asphalt racing no longer co-existed at the championship level. Most top USAC drivers developed specializations in one or the other, and racers picked either dirt or blacktop—unless they had enough sponsorship dollars or personal fortunes to choose both—to be competitive. In 1971, these distinctions became permanent; the top USAC dirt series became the Silver Crown division. Still, many drivers started in this series and worked their way up to Indianapolis. Thus, USAC had two premier open-wheel divisions—major-league dirt and major-league pavement.[19]

As was the case in championship racing, USAC Silver Crown dirt track racing also had conflicts. In the mid-1970s, outlaws and drivers who "raced where the money was" challenged USAC's dirt-track racing superiority. Track owners and promoters organized more big-money all-star events intended to draw top national drivers, regardless of sanctioning body affiliation. Drivers earned big purses and bragging rights by beating the best drivers at non-sanctioned, all-star events. USAC's influence waned on dirt too.[20]

Series in Eastern Iowa," in *Horsehide, Pigskin, Oval Tracks, and Apple Pie*, James A. Vlasich ed., (Jefferson, NC: MacFarland, 2006), 153-165; "Fair Alters Race Lineup, Stays in Tune with Times," *National Speed Sport News*, 13 July 1977, 11; "Utz Again Champion in IMCA Sprint Cars," *National Speed Sport News*, 28 September 1978, 2, 21. A new organization assumed the IMCA name and began operations in 1978. It remains one of the biggest dirt track racing sanctioning bodies in the Midwest.

[18] "The Dirt Champ Cars," *Open Wheel*, June 1983, 40-50, 85.

[19] Shav Glick, "Sears Point: Auto Racing in a Picnic Setting," *Los Angeles Times*, 22 March 1970; Stan Kadwasinski, "Leffler and Kinser win in Sprints," *National Speed Sport News*, 2 August 1978, 3, 24; "Bettenhausen Wins Illinois Dirt Feature," *Illustrated Speedway News*, 22 August 1978, 18; Ron LeMasters Sr., "A Vintage Fan's Look to the Future," *Open Wheel*, March 2000, 76-77.

[20] Tom Kennedy, "Iowa Ace Wagner Outruns Standout Field at Phoenix," *National Speed Sport News*, 17 October 1973, 1; "Minnesota State Fair to Open Saturday," *Illustrated Speedway News*, 22 August 1978, 18; Dave Argabright, "The Race That Changed the World," *Open Wheel*, October 2000, 64-71. Jan Opperman's victory at the 1975 Hoosier Hundred changed dirt track racing and the status of outlaws forever.

The increasing popularity of overhead sprint-car wings further segmented open-wheel dirt-track competitors and fans in the 1970s. Wings, which initially appeared in the 1960s primarily as a safety measure, encased a driver and prevented the growing problem of out-of-control racecars flying through the air. Wings also changed the technique of racing a sprint car because the contraptions create significant downforce. Wings eliminated to a degree the driver's need to adapt to his or her driving environment. Changing surface conditions affected non-winged cars to a far greater degree than the winged ones. [21] As retired ace Jerry Blundy said, "that damn thing could give you all kind of traction. Bolt it on and you'll win a race. . . . It took a lot of the individual racing skill out of it. Anybody could drive when you put on a wing, almost."[22] In 1971, the United Racing Club (URC), a northeastern sprint car group, became the first major entity to make wings mandatory.[23]

Sprint car racing became (and remained) divided by the wing issue. Marty Little, long-time *National Speed Sport News* writer, perhaps best described the differences between winged and non-winged sprint car racing from a fan's point-of-view:

> Really something that I enjoy but seldom get a chance to see is dirt sprint cars without a wing. It's a totally different deal than with a wing. You've got to drive it. The wing gives you a tremendous amount of downforce, and therefore, you point it. A sprint car without a wing on it . . . it's just a whole different game. It's not necessarily follow the leader, but with a wing you can drive a car down in the corner so far and that wing will plant it on the ground and you just hang on from there. With a non-winged car, you have to crank it sideways and work your way through the corner. Of course, if the track surface, if it's wet and heavy or dry, slick, whatever, you've got to compensate for that, but it's a much more exciting show.[24]

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[21] Ron LeMasters, "Johnny and Bobby Each Win Twice!" *National Speed Sport News*, 27 July 1977, 3, 19.

[22] Blundy, interview by author.

[23] Ernie Saxton, "URC to Use Wings in '71," *Illustrated Speedway News*, 1 December 1970, 10.

[24] Little, interview by author.

USAC's lack of national strength, disagreements regarding the rules and governance of sprint car racing, rising costs, emergence of winged-sprint car racing, and the death of the IMCA in 1977 created a national power vacuum for dirt track racing. The World of Outlaws formed the following year. As its name indicates, the series consisted of a traveling band of drivers, who raced from March through October a few days a week. The first Outlaw event took place at Devil's Bowl Speedway in Mesquite, Texas, on March 18, 1978. Unlike the USAC Silver Crown sprint cars, the World of Outlaws sprinters had overhead wings.[25]

In its formative years, the World of Outlaws competed extensively in the Northeast, Midwest, and California. The only southeastern races were the February season openers in Florida—although the series worked its way into southern states in later years. The World of Outlaws nationalized sprint car dirt-track racing in the United States and brought major-league dirt track racing to minor-league metropolises, such as Fargo, North Dakota, (Red River Valley Speedway) and Harrisburg, Pennsylvania (Williams Grove Speedway). In time, the World of Outlaws became, in some markets, a bigger draw than USAC sprint car racing. USAC failed to fill the national dirt track racing power vacuum developed in the latter 1970s. The World of Outlaws rivaled USAC's Silver Crown division as the top American sprint car series, but non-winged sprint cars remained popular in regional pockets. This type of racing remained in the "USAC states" of Illinois, Indiana, and Ohio. California and Arizona also served as hotbeds for

[25] Jerry Clum, "The Birth of the World of Outlaws," *Illustrated Speedway News,* 10 January 1979, 9; Jerry Clum, "Earl Baltes to Run Sprints Without USAC Sanction," *Illustrated Speedway News,* 11 April 1978, 12; Linda Mansfield, "High Tire Costs, World of Outlaws Haunts USAC Sprint Car Division," *National Speed Sport News,* 24 January 1979, 5, 16; Bill Hill, "41-Race, $800,000 Season for 'Outlaw' Sprint Cars," *National Speed Sport News,* 13 December 1978, 45; Dave Argabright, "Devil's First Born," *National Speed Sport News,* February 2002, E-6, E-7.

non-winged sprinters. The preferences and divisions developed during the 1970s, for the most part, exist today. [26]

This splintering, rivaling, and evolution of racing entities benefited NASCAR in the long run. Unlike USAC, vibrant in 1970, the NASCAR Grand National series fell on hard times. Tracks such as Charlotte and Atlanta—although attendance was steady—struggled financially, primarily due to poor management. In the early 1970s, corporate sponsorships declined, and NASCAR lost factory support from major auto companies. However, by the end of the 1979 season, NASCAR emerged unquestionably as the only stable and dominant American sanctioning body—its premier division verging on a major national breakout. Throughout the 1970s, NASCAR gained strength and stability, and by the mid-1970s, NASCAR-sanctioned racing became the most attended spectator form of motorsport in the world.[27]

At the time, the nation was developing a popular identification and appreciation for southern culture and entertainment. The same South presented on television with civil rights marches, widespread violence, and racial hatred in the 1960s was cast in a different light the following decade. The movie *Smokey and the Bandit*, rock-band Lynyrd Skynyrd, and television show the "Dukes of Hazzard" brought Dixie into mainstream popular culture. This

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[26] "IMCA: Where is it Today?" *National Speed Sport News*, 5 July 1978, 12; Larry Warren, "Thunder in California: The CRA," *Open Wheel*, December 1986, 34-39; Doug Auld, "Ted and David," *Open Wheel*, June 2000, 40-45; Paul Dean, "The Sprint Car Connection," *Road and Track*, December 1998, 186.

[27] Atlanta Speedway filed for Bankruptcy in January 1971. Bob Myers, "Southern Strategy," *Stock Car Racing*, November 1970, 7, 55; Bob Myers, "Southern Strategy," *Stock Car Racing*, December 1970, 7, 57; Charles B. Camp, "Auto Makers' Cutback in Big-Time Racing Seen Jolting Ancillary Business Hardest," *Wall Street Journal*, 24 November 1970; Shav Glick, "Falstaff 400 Lures Kingdom of NASCAR West," *Los Angeles Times*, 14 June 1970; "Ford Quits Racing," *Illustrated Speedway News*, 24 November 1970, 3; "Allison, Charging Cover-Up by NASCAR, Threatens Suit," *National Speed Sport News*, 17 October 1973, 1, 10; "New Group Takes Over at Atlanta," *National Speed Sport News*, 20 February 1974, 3; NASCAR Biggest Spectator Draw in World," *National Speed Sport News*, 5 January 1977, 3; John B. Heimann, "The Last Great American Road Racing Series, Part 1," *Vintage Motorsport*, November/December 2003, 48-62.

"southernization" of America was also manifested by a growing national interest in NASCAR's brand of stock racing.[28]

Sunbelt politics and NASCAR developed close ties in the decade of change. When Richard Nixon ran for president in 1968, and again in 1972, his political strategists ensured that the GOP candidate courted the South and its stock car-racing fan base (Although Bill France Sr. campaigned on the behalf of George Wallace). In the late 1970s, Ronald Reagan, George H. W. Bush, and Republican strategists worked with stock-car icon and staunch conservative Richard "The King" Petty to garner GOP votes for Reagan's presidential campaign. Earlier in the decade, Democrat Jimmy Carter also employed the "southern strategy." In 1971, he entertained NASCAR drivers at the Georgia governor's mansion, and as president invited drivers to the White House in 1978.[29]

A southern staple crop also had national implications for NASCAR. Corporate tobacco and motorsports consummated a marriage on the heels of the 1969 Public Health Cigarette Smoking Act, which banned cigarette advertising on television and radio. Big Tobacco secured a powerful stake in auto racing when tobacco companies began sponsoring American motorsports in response to the ban. Winston-Salem, North Carolina-based RJ Reynolds (RJR) Tobacco Corporation entered the motorsports winner circle in 1971. The growth of the Marlboro brand and Phillip Morris International threatened RJR's Winston brand, once the dominant cigarette brand in the country. The company seeking a new advertising medium, RJ Reynolds

[28] "Paris Cancels U.S. GP at Watkins Glen," *National Speed Sport News*, 21 November 1979, 3, 6.

[29] Thomas Edsall and Mary Edsall. *Chain Reaction: The Impact of Rights, Race, and Taxes on American Politics* (New York: Norton, 1991); Bruce J. Schulman, *The Seventies: The Great Shift in American Culture, Society, and Politics* (New York: Free Press, 2001); "A Graceful Evening at the Mansion," *NASCAR Newsletter*, 15 April 1971; Venlo Wolfsohn, "Stock Stars: Men Who Came to Dinner." *Washington Post*, 14 November 1976; Joseph McLellan, Lynn Darling, and Nancy Collins, "Revving and Racing into the Promised Lawn," *Washington Post*, 14 September 1978; "Racers Enjoy White House Reception," *National Speed Sport News*, 20 September 1978, 2, 30; Bill Morris and Joseph P. Duggan, "Bumper to Bumper," *Washington Post Magazine*, 22 April 1979, 1-10; Daniel, *Lost Revolutions*, 97.

sponsored a Grand National race at Talladega, marking the beginning of a 33-year association that greatly benefited both entities.[30]

Tobacco "drove" racing in the 1970s. The loss of cigarette advertising on television became auto racing's gain; NASCAR benefited the most, and the addition of RJ Reynolds was a major step in NASCAR's recovery and ensuing ascendancy in the 1970s. Phillip Morris and USAC launched the Marlboro Championship Cup in 1971. RJ Reynolds followed suit in 1972 and assumed sponsorship of the Grand National series under a new moniker, Winston Cup.[31]

During the 1970s, NASCAR attracted larger non-Southern audiences, and Grand National (Winston Cup) superspeedway events also started to take place outside of Dixie. As mentioned earlier, NASCAR's top division, with few exceptions, steered away from the Midwest in the 1960s. However, the construction of Michigan International Speedway (in the Irish Hills region of southern Michigan) in 1968 opened to NASCAR a superspeedway venue in the Detroit/Toledo market. Used also for championship racing, the track became a major NASCAR venue. With the addition of Michigan, NASCAR's top division began filling northern and Midwestern markets. As of 2009, two annual "Cup" races occurred at Michigan; four years after championship racing ceased at the facility.[32]

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[30] Linn Hendershot, "A New Name in Racing: Marlboro," *USAC 70*, September 1970, 5; "Marlboro to Sponsor a 21-Race Series," *New York Times*, 8 March 1970; Gordon Kirby, "Electric Year," *Racer*, May 2001, 73-74; Gordon Kirby, *Unser: an American Family Portrait* (Dallas: Anlon, 1988); "$300,000 for Marlboro Race Trail," *Illustrated Speedway News*, 17 November 1970, 11; John S. Radosta, "New Sponsor on Tobacco Road," *New York Times*, 15 December 1971.

[31] The NHRA-sanctioned drag racing series was sponsored by the Winston Brand until 2004. "Cigarette Sponsors Now Turning to Auto Racing," *Illustrated Speedway News*, 5 January 1971, 3. Liggett and Myers (L & M)(Durham, North Carolina,) sponsored some sports car events, and Philip Morris (Richmond, Virginia,) and Brown & Williamson (Louisville, Kentucky,) vested heavily in Championship and Formula One racing. Brown and Williamson's Viceroy brand began sponsoring championship cars in 1972. This set in motion a tobacco war in victory lane, where Viceroy-sponsored cars could and did win races in the chase for the Marlboro Cup.

[32] "Michigan Plant Signs 10-Yr. NASCAR Pact," *Illustrated Speedway News*, 22 October 1968, 3; Shav Glick, "USAC Titlist Wants no Part of NASCAR," *Los Angeles Times*, 11 November 1980.

The Mid-Atlantic region lacked a superspeedway, and the following year, a one-mile "pure" oval opened at Dover, Delaware. The "Monster-Mile" attracted southern New Jersey, Philadelphia, Wilmington, and Baltimore-area fans who previously watched Grand National races at small facilities, such as Maryland's 8000-seat Beltsville Speedway. Dover's first Grand National event took place in 1969, and beginning in 1971, NASCAR scheduled two annual races at the facility.[33]

Although not a fair facility, this multi-purpose complex reintroduced the auto racing/horse racing connection. Dover maintained a half-mile horse track (Dover Downs) within the mile-long concrete racetrack. These tracks were built within the small city and situated in a similar geographic relationship as urban fair facilities at state capitols, such as Des Moines and St Paul. In a similar manner as the older state fair tracks, Dover's speedway sustained community and facility coexistence, while stimulating the local and state economy. The bi-annual NASCAR races easily became Delaware's largest sporting events of the year.[34]

The configuration of Dover Speedway provided yet another reminder of how superior motorsports technology could trump a constructed racing environment. In 1969, the green flag went up for a USAC championship car race at the new facility. This crash-filled race was a disaster. USAC officials failed to note that the powerful cars were simply too light and quick for the 24-degree banked track. USAC missed the opportunity to spread that form of racing into the

[33] "Indy Stars Set for Delaware 200-Miler," *Illustrated Speedway News*, 19 August 1969, 13; Ron Mentus, "The Incredible Mile," *Auto Racing Monthly*, March 1975; J. J. O'Malley, "Fast Pit Crew, Fast Drive Bags Dover for Yarborough," *National Speed Sport News*, 18 May 1977, 2, 27.

[34] "Dover Downs Goes Aug. 3," *USAC News*, 25 July 1969, 1.

Mid-Atlantic region of the country. USAC championship cars never returned to Dover, but NASCAR did.[35]

The third superspeedway boom concluded in 1971 with the construction of Pocono International Raceway. Located in Long Pond on a former spinach farm in rural, northeastern Pennsylvania, a little over 100 miles north of Langhorne, the 2.5-mile, low-banked, tri-oval had a one-of-a-kind, scalene-triangle-shaped configuration. Situated on a 1,024 acre parcel of land, Pocono boasted the longest straightaway (3,740 feet) of any American racetrack and hosted USAC and NASCAR (Championship and Winston Cup) events during the 1970s. The track was only a few miles from I-80 and became NASCAR's long-lasting venue for fans from New York, New Jersey, and Pennsylvania. Attendance at northern Grand National races grew steadily over the years, and over 50,000 fans attended the Michigan and Pocono Grand National races in 1978. NASCAR was clearly capturing new markets, and although Pocono served as a major venue for championship racing, this relationship soured in the 1980s. After a falling out between CART and Pocono (Pennsylvania) Raceway owner Joseph Mattioli, that series stopped competing at the track in 1989. A major championship racing market became a major stock car racing market. The track eventually had lasting benefits for NASCAR, not USAC or CART.[36]

The broadcast media contributed to NASCAR's growth during the last decades of the twentieth century, and increased NASCAR television coverage attracted additional non-southern

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[35] "Indy Stars Set for Delaware 200-Miler," *Illustrated Speedway News,* 19 August 1969, 13; Vince Slaven, "The Mid-Atlantic 300," *Stock Car Racing,* November 1969, 20-22. USAC-sanctioned stock car racing continued at Dover into the 1970s.

[36] "Cale records Victory No. 7 at Bumpy MIS," *National Speed Sport News,* 22 June 1977, 3, 14; "Cale Fights Back to Win at MIS," *National Speed Sport News,* 21 June 1978, 2, 26; Linda Mansfield, "Waltrip Edges Pearson in Pocono 500 Thriller," *National Speed Sport News,* 2 August 1978, 3, 21; Bob Kopplin, "Al Unser Wins Schaefer 500 before 125,000, *Illustrated Speedway News,* 27 June 1978, 3 (Pocono); Bruce A. Bennett "Just What the Doctors Ordered," *Speedway Illustrated,* July 2007, 102-105; J. J. O'Malley, "Coke 500 Earns 'Great Race' Tag as Parsons Wins," *National Speed Sport News,* 3 August 1977, 3, 20; *Schaefer 500 at Pocono Official Program, 3* July 1971.

fans. The same year Daisy Duke debuted on CBS and became a household name, network executives elected to broadcast the Daytona 500 live in 1979. It was the first NASCAR event aired nationwide in its entirety and featured a last-lap crash on the backstretch between the first- and second-place cars of Donnie Allison and Cale Yarborough, producing one of the most dramatic finishes in history. The environment clearly played a pivotal role—a snowstorm blanketed much of the Northeast and millions of living-room bound channel surfers tuned in to the Sunday afternoon race. This memorable event marked the beginning of NASCAR's climb on television.[37]

The 1970s closed with a bang and the year 1979 became a benchmark in American motorsports. The year NASCAR "broke out," American championship racing splintered. Throughout racing history, many of the greatest "battles" took place off the racetrack between or within sanctioning bodies. NASCAR, however, was solid. When Bill France, Sr. formed NASCAR in 1947 he said, "our first aim is sanctioned races on a national scale, under a national formula, namely stock car races. . . ."[38] In 1972, Bill France Sr. turned NASCAR's control over to his son. Although slightly less imposing in stature than his father, the younger France grew up with NASCAR. By 1980, under the strong guidance of Bill Jr.–who continued his father's strict

[37] There were 46 races on the schedule in 1971, 31 in 1972. Robert Lipsyte, "Tennis Tastes Good Like a . . .," *New York Times,* 14 January 1971; Jim McLaurin, "A Personal Loss: Winston a Reminder of Robertson," *The (Columbia, SC) State,* 21 May 1999; "Tobacco Firm Sponsoring Race," *Southern Motorsports Journal,* January 1971, 1; "ABC and Daytona Ink Three-Year TV Contract," *National Speed Sport News,* 3 December 1975, 2. "Stock Car Racing Gaining Fans through TV Exposure," *Illustrated Speedway News,* 31 January 1978, 11; Tom Gillespie, "Johnson's Sponsor Search Brings RJR to NASCAR," *NASCAR Winston Cup Scene,* 3 December 2003, 54-60; Steve Waid, "R. J. Reynolds Wrap," *NASCAR Winston Cup Illustrated,* December 2003, 10; Kenny Bruce, "Thanks for the Memories," *NASCAR Winston Cup Scene,* 20 November 2003, 12."Daytona 500 to be Broadcast Live by CBS-TV," *Illustrated Speedway News,* 14 February 1978, 8; "All Live Daytona 500 as CBS-TV Moves in," *National Speed Sport News,* 17 May 1978, 5; Bob Kopplin, "Fist Fight, Accident and Excitement Add to Petty's Daytona 500 Win," *Illustrated Speedway News,* 21 February 1979, 3. Richard Petty won the race and a fight erupted on the track infield between Yarborough and Bobby Allison.

[38] "Stock Car Racing Leaders Form New National Association," *Speed Age,* February 1948, 28.

policies and maintained a family stranglehold on the entity—this goal had nearly reached fruition. NASCAR became the most "consistent" sanctioning body in American motorsports. Armed with strong leadership and tobacco money, NASCAR grew at its own pace little affected by negative developments within or outside of the organization. Beginning in the 1970s, and throughout the modern era, NASCAR slowly usurped championship racing's regional and national clout.[39]

Sprawl and a loss of venues was, in the meantime, championship racing's cancer. Ontario Speedway, for example, can be equated to a weakening USAC. Mismanagement plagued both. The track drew decent championship crowds, but never became the "Indianapolis of the West" as hoped. Ontario defaulted on bonds in 1972. By October 1980, the track was in foreclosure and $25.5 million in debt. The following year the Chevron Land and Development Company purchased the property. As long-time *Los Angeles Times* motorsports correspondent Shav Glick stated, "when Ontario Motor Speedway closed . . . it was a major blow to auto racing's ego."[40] But in truth, the pride that sustained USAC for so many years was destroyed. The same year that Ontario held its last race in 1981, the USAC championship division ceased, and CART alone assumed control of championship racing in America. USAC clearly was not "the sport of the seventies," and by 1979, it was apparent that NASCAR earned that distinction more than any sanctioning body.[41]

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[39] For example, "Bank Disenchanted, Can-Am Series Shaky," *National Speed Sport News,* 2 March 1977, 3, 16; Bill Oursler, "Group 5 Wings, Noses to Tighten Camel GT Racing," *National Speed Sport News,* 16 February 1977, 6, 28; "USAC Series Sponsor Hot over Phoenix Brawl," *National Speed Sport News,* 30 March 1977, 3, 16; "Winston Loves Racing Like You, And Tells Everyone 'How Good it Is,'" *National Speed Sport News,* 16 February 1977, 22.

[40] Shav Glick, "Racing is Running out of Gas as the '80s Begin," *Los Angeles Times,* 3 January 1980.

[41] "Foreclosure Action May End OMS Racing," *National Speed Sport News,* 21 November, 1979, 3, 15; Ronnie Allyn, "Foyt Easy Ontario Victor as USAC Fields 21 Cars," *National Speed Sport News,* 28 March 1979, 3, 16. USAC, did however, retain the Indianapolis 500 sanction and allowed CART teams to compete at Indy through the mid-1990s. In 1980, USAC and CART co-sanctioned five "championship" races.

Unlike USAC, which within ten years lost three of its biggest venues (Langhorne, Trenton, and Ontario) NASCAR's major facilities recovered from the shaky period in the early 1970s. Tracks built during the superspeedway boom drew massive crowds and remained safe from suburban encroachment. NASCAR had the Daytona 500 in February (a few weeks after the Super Bowl), the World 600 at Charlotte (Memorial Day weekend), Firecracker 400 (Fourth of July weekend), and Southern 500 at Darlington (Labor Day weekend). As NASCAR expanded beyond the Southeast, it parlayed geography into long-term success and stability, its schedule remaining strategically consistent and memorable. The Grand National series contested its last dirt events in 1970, and beginning in 1972, NASCAR dropped smaller venues from its schedule, resulting in a significant reduction of races in its top division. Thereafter, NASCAR's schedule strongly resembled the one of the present, with bi-annual races held at Daytona, Charlotte, Talladega, Atlanta, Michigan, and Dover, and varying little season-by-season.

Only a portion of the "decade of change's" story has been told thus far. Along with the infighting, NASCAR insurgency, growing costs, professionalization, and corporatization, and continuing bouts with population sprawl, motorsports faced a new set of environmental challenges in the 1970s and beyond.

CHAPTER 7
PETROLEUM AND POLLUTANTS, (1970-1979)

Auto racing's biggest problem is that it's conspicuous.

—*Bob Stanley*[1]

There is no doubt that strict environmentalists are in a formidable position to use unjust noise pollution standards in an effort to abolish auto racing in the United States.

—*Al Stilley*[2]

According to *New York Times* reporter John Radosta, on the morning of September 6, 1970, "eye-biting smog" blanketed California's Ontario Motor Speedway, completely obscuring the nearby San Gabriel Mountains.[3] In fact, smog plagued the whole weekend, and terrible visibility threatened the California 500. However, later that morning, Santa Ana winds cleared the skies enough to allow Ontario's inaugural event. Yet, natural forces still affected the outcome. Strong gusts blew swirling sand on the track, destroying the mechanical systems of countless racecars. Only six out of thirty-three cars finished the race.[4]

Six years later, NASCAR driver Dick Brooks drove a Truxmore Industries-sponsored car in the Winston Cup series. The Richmond, Virginia, company manufactured solid waste management equipment. In the Official 1976 Daytona 500 program, a Truxmore advertisement stated, "Race driver Dick Brooks speaks on the big race: the Energy, Environment, Ecology, and Economy race. . . . What kind of equipment is your town driving in the big environment race?"[5] The full-page advertisement was an early example of an environmental consciousness in auto

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[1] Bob Stanley of San Diego, California, Letter to the Editor, *Los Angeles Times,* 14 March 1974.

[2] Al Stilley, "Noise and the Illinois Race Track," *Stock Car Racing,* January 1974, 24-27. quote on 27.

[3] John S. Radosta, "32 Cars Warm Up for 500 on Coast," *New York Times,* 4 September 1970.

[4] Shav Glick, "Retrospective on a Track that Went Downhill," *Los Angeles Times,* 18 December 1980.

[5] *Daytona 500 1976 Official Program,* 3.

racing and illustrated the growing intersection between economy, the environment, and motorsports. Technically, the "big" race, as applied to motorsports and the environment, began in Paris in 1894 the day of the world's first auto race. But until the 1970s, motorsports entities raced on the track not with the earth.

Previous chapters illustrated that environmental forces constantly shaped the course of American racing, and each decade connections between nature and motorsports intensified. In the 1970s, as in previous decades, sprawling neighborhoods appeared where racetracks disappeared. However, other emerging environmental factors threatened the development of the sport at all levels. Oil demand increased sharply after World War II. More Americans purchased cars and trucks, and increasingly purchased products made from petroleum-based products, such as plastics and synthetic cloth. The United States, in the 1950s, was the world's number one exporter of oil, but by the 1970s, became the leading importer of oil. With this excess came more pollution, fuel consumption, traffic, interstates, speed, and highway fatalities.

In 1960, a coalition of predominately Middle Eastern, oil-rich Arab states formed the Oil Producing Exporting Countries (OPEC). This consortium quickly amassed and exerted a strong influence on the global oil market. Eventually, OPEC strategically utilized oil as a geopolitical weapon. Reacting in part to the Arab-Israeli War of 1973, on October 19 of that year OPEC instituted an oil embargo on the United States and other "non-friendly" nations that supported Israel. Within a few months, the price of oil shot up from about three dollars in October 1973 to eleven dollars per barrel in January 1974. The decision of OPEC to halt the export of oil to the United States in late 1973 became a watershed period in American economic, strategic, and energy policy.[6]

[6] Karen R. Merrill, *The Oil Crisis of 1973-74* (Boston: Bedford-St.Martin's Press, 2007).

In an effort to conserve dwindling oil supplies, the federal government extended daylight savings time into the winter and imposed a nationwide 55-mile-per-hour speed-limit maximum. Gas stations closed once their pumps went dry. Where gasoline was available, lines of fuel-thirsty vehicles snaked from service stations and down the highway, sometimes extending longer than a football field. Dealers often instituted a gallon limit per vehicle. Some states and communities enforced minimum-gallon purchasing and/or mandated odd-even rationing, permitting only drivers with license-plate numbers ending with odd numbers to purchase on odd-numbered days. High diesel prices led to trucker blockades on interstate highways. National gasoline prices, which averaged approximately 25 cents-per-gallon in January 1973, climbed to nearly 50 cents-per-gallon by early 1974.[7] The embargo ended in March 1974, but crude oil and gasoline prices remained unstable and high throughout the decade, and as historian Karen Merrill maintained, "the oil crisis . . . served as evidence for environmentalists that the United States needed to dramatically change course and enact policies that would encourage, even force, Americans to conserve oil and explore other sources of energy."[8] Of course, it was no surprise that fuel concerns alarmed the motorsports industry. In addition to the tobacco crop, petroleum became the other major natural "commodity" to influence American auto racing in the 1970s.[9]

The crisis was a wake-up call; Americans (and racers) realized that the energy was finite, no longer to be taken for granted. Despite the fact that thousands of people made a living in the motorsports industry, racing's critics claimed that the sport was economically and

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[7] Paul Hodge and Edward Walsh, "Purchase Fuel Every Other Day," *Washington Post*, 7 February 1974; Harry Bernstein and Dick Main, "Preparing for Truck Tieup," *Washington Post*, 6 January 1974; Gerald Gold, "Rise in Costs here is Double Nation's," *New York Times*, 23 January 1974; Ronald Sullivan, "Byrne Announces Mandatory Plan of 'Gas' Rationing," *New York Times*, 9 February 1974.

[8] Merril, *The Oil Crisis of 1973-74*, 2.

[9] Franklin Tugwell, *The Energy Crisis and the American Political Economy* (Stanford, Cal.: Stanford University Press, 1988), 97-136; Michael C. Jensen, "Removal of Dealer Allowances has Raised 'Gas' Prices up to 20%," *New York Times*, 24 February 1973.

environmentally wasteful and a non-justified, non-essential use of fuel. The print media and numerous letters to editors reflected this sentiment.[10]

When fuel was rationed and motorsports was banned in 1942, racers abided patriotically during World War II—with little to no resistance. As fuel-availability concerns ambushed the globe, racing entities in 1973 prepared to fight governmental regulation against their sport. Instead of adopting a wait-and-see attitude, the motorsports community united in the face of the crisis. The Automobile Competition Committee of the United States' (ACCUS)[11] formed the National Motorsports Congress (NMC) to give American auto racing industry a head start on possible federal legislation to ban the sport. Bill France Sr. (a year after he handed the keys to NASCAR's kingdom to his son) headed the NMC, and the new group set up offices in Washington, D.C. In autumn 1973, the NMC began working in conjunction with the Federal Energy Office (FEO), formulated a plan to deal with the crisis, and commissioned a motorsports energy consumption report.[12] Part of the NMC's goal was to ensure auto racing's fair treatment with other entertainment mediums. Bill France Jr. stated the NMC's position in an open letter to NASCAR members in a 1973 *NASCAR Newsletter*:

> We in automobile racing do not want and do not ask for any special privileges. We understand the problem the nation is facing and want to do our share in saving the consumption of energy for the total good. But we do want to be treated equally and fairly by the energy consuming public and sports fans and by the federal and state governments.[13]

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[10] For instance, William C. Fisher, "Letter to the Editor," *Los Angeles Times*, 16 March 1974; Bob Stanley, "Letter to the Editor," *Los Angeles Times*, 14 March 1974; Shav Glick, "Auto Racing: Its Stars are 'Gas Guzzlers,'" *Los Angeles Times*, 22 December 1973; Clint Johnson, "Racing's Use of Fuel," *Stock Car Racing*, June 1978, 54-55.

[11] ACCUS was comprised of NASCAR, USAC, SCCA, IMSA, and NHRA.

[12] "Racing Tells Own Story in Fuel Crisis," *NASCAR Newsletter*, 15 December 1973, 2; "Nat'l Group is Formed," *National Speed Sport News*, 28 November 1973.

[13] Bill France Jr., "The President's Corner," *NASCAR Newsletter*, 15 December 1973, 2.

Although initially compiled in an effort to save motorsports, this report illustrated how much energy, or more specifically gasoline, different forms of sports and leisure consumed in the United States. In December 1973, representatives from 23 sports attended a meeting with the FEO in Washington, D.C., and Bill France Sr.'s presentation followed Bowie Kuhn, the then commissioner of Major League Baseball. According to the NMC study, a 500-mile stock car race consumed less fuel than a chartered flight transporting a pro football team from the East to West Coast. In addition, auto racing, with its total annual fuel consumption of 93.6 million gallons, ranked seventh behind vacation travel, "non-scheduled" aviation, movies, football, basketball, and horse racing, and barely ahead of the eighth-place sport, rodeo. [14] NMC representative John Cooper of USAC stressed that "fuel consumption by all mass entertainment sports represents only a 'drop in the bucket' when compared to leisure time usage in general."[15]

On January 3, 1974, FEO deputy administrator John Sawhill met with representatives from sports and leisure time activities for another meeting. Bill France Sr. represented the NMC. The FEO recommended that all sports cut energy consumption voluntarily by 20-25 percent. The FEO granted the motorsports industry an opportunity for "voluntary compliance," permitting the racing community to develop and adopt its own conservation measures.[16]

In addition to its social and recreational role as a leisure activity, the United States government apparently recognized the importance of racing to the American economy. The American auto racing industry reportedly generated two-billion dollars in 1973. Federal officials

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[14] "Racing Claims It's Not Big Fuel Consumer," *Los Angeles Times,* 21 November 1973; "Auto Racing Could Be Unfair Target in Energy Crisis," *Illustrated Speedway News,* 1 January 1974, 6; Clint Johnson, "Racing's Use of Fuel," *Stock Car Racing,* June 1978, 54-55; George Bishop, "Must We Now Kill Motorsport?" *Sport and Recreation,* 20 (1979): 50-51.

[15] "Football Leads Sports in Burning Fuel," *New York Times,* 21 November 1973; "Racing's Fuel Use Small in Sports," *National Speed Sport News,* 28 November 1973, 3.

[16] "Racing's Fuel Use Small in Sports," 3; "Compliance on Cutback by ACCUS," *National Speed Sport News,* 16 January 1974, 3.

saw how vital the Indianapolis 500 was to the local economy of central Indiana. In the early 1970s, the annual race generated about 10 to 12 million dollars-a-year to the city.[17] Sawhill stated that "the FEO wants people to attend and enjoy auto racing, but also to do so in a more conservative way as regards to energy usage."[18] Sawhill maintained that the Nixon administration noted the importance of sports as "a very important part of our economy."[19]

Although in hindsight, "paranoia" may have been partially responsible for auto racing's efforts to unite and take collective, "defensive" action, this was a challenging time for the motorsports industry. Grassroots racing had the most to lose, and although cutbacks could result in the loss of revenue, a complete ban would put some track owners permanently out of business. As representatives from the largest American entities lobbied in Washington, D.C., smaller clubs worked with ACCUS and the NMC with the common goals of preserving the 1974 season, ensuring that small track owners, at the very least, broke even. The NMC asked that all American track operators and sanctioning body officials prepare and submit energy-saving reports by January 25. Racing groups embraced voluntary compliance, and track operators and racing officials presented energy-saving plans as a "first strike." Reportedly, over half of the nation's 1,800 tracks submitted their plans.[20]

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[17] Chris Economaki, "From the Editor's Notebook," *National Speed Sport News,* 9 January 1974, 4; Rich Dobson, *The Indy 500: An American Institution Under Fire* (Newport Beach, CA: Bond/Parkhurst, 1974).

[18] "Govt. Encourages Going to the Races," *National Speed Sport News,* 30 January 1974, 3.

[19] Note the Sunbelt connection between racing and politics. "Racing on 'Honor' to Save Energy," *National Speed Sport News,* 9 January 1974, 3.

[20] "NASCAR Preparing Energy Saving Plans for '74 Season," *Illustrated Speedway News,* 8 January 1974, 3; Chris Economaki, "From the Editor's Notebook," *National Speed Sport News,* 30 January 1974, 4; Al Stilley, "The Gasman Goeth," *Stock Car Racing,* March 1974, 50-51; "Tracks Urged to Forward Energy Conservation Plans to NMC," *Illustrated Speedway News,"* 8 January 1974, 12; "Set Jan. 25 Deadline for Tracks to Comply," *National Speed Sport News,* 9 January 1974, 4; "Bad Year Foreseen at Glen," *National Speed Sport News,* 19 December 1973, 3.

Racing stepped up to the FEO's challenge—curtailing events the most visible response. NASCAR cut the starting field from 40 to 35 cars and reduced practice time for the season-opening Winston Cup race in January at Riverside, California—the first major event shortened. The types of measures implemented at Riverside became standard for most American sanctioning bodies and track operators, who despite concerns continued to pull in spectators. During the height of the crisis in late January of 1974, 32,500 fans thronged the first race of the Winston Cup season.[21]

Significant cutbacks continued. Most significantly, Bill France Jr. postponed the popular 24-hour sports-car race at Daytona. In addition to shortened twin-Daytona qualifying races, the marquee race that February was the Daytona 450. Practice for stock car events during Speedweeks saw an eight to five-day reduction. According to a Speedway representative, the amount of fuel used at the abbreviated 1974 Speedweeks "was at an all-time low," totaling about a 30 percent reduction.[22]

Later in the season, other NASCAR superspeedways contributed to fuel rationing measures. The 500-mile Winston Cup races in Atlanta and Darlington were cut to 450 miles. In addition to shortening the scheduled 500-mile race to 450 miles (170 as opposed to 188 laps), Talladega officials imposed a 55-mile-per-hour speed limit on speedway safety vehicles and pace cars. Talladega and other facilities regulated thermostats in speedway buildings and kept electric

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[21] Less available spots and prize money, eventually hurt some teams—most of which were based in the East—that still had to invest in fuel to cross the country in their race haulers. "NMC, NASCAR Agrees to Meet FEO Guidelines," *NASCAR Newsletter*, 14 January 1974, 1; Ronnie Allyn, "Cale (Energy Crisis) Yarborough Runs Chevy Dry Winning RIR 500," *National Speed Sport News*, 30 January 1974, 3, 12. The race was partially run on January 22, but was halted by rain. The 32,500 spectators came for the conclusion on January 30.

[22] "Speedweeks will Conserve Fuel," *NASCAR Newsletter*, 15 January 1974, 1; "Daytona Postpones 24 Hours," *National Speed Sport News*, 5 December 1973, 2, 9; "King Richard Crawls to 5th Daytona 500 Win," *National Speed Sport News*, 20 February 1974, 3; "Gas Usage at Daytona off 30%," *National Speed Sport News*, 27 February 1974, 3; Shav Glick, "A Fuel Problem? 100,000 See Petty Win Daytona 500," *Los Angeles Times,"* 18 February 1974.

signs off in the evening.[23] Pocono Raceway's seven-race schedule was reduced to four major events. Joseph Mattioli, owner of Pocono Raceway, initiated a local program in which spectators organized carpools. He claimed, "we are Americans first and race fans second."[24]

Smaller entities and short track owners voluntarily took measures to reduce fuel use and save energy at their respective facilities. They cut or eliminated practice time, and frequently shortened race distances. Night races became day (dustier) races. Some entities such as the Northeastern ARDC series sponsored carpooling plans for the 1974 season. Small tracks, such as Hickory Motor Speedway in North Carolina, replaced caution flags with red flags, meaning that after an accident or incident cars would stop on the track instead of proceeding at a slow speed. Grandview Speedway in Pennsylvania cut practice time by 50 percent, started races earlier at night, and shortened the length of caution flags. Fans all over watched fewer races in 1974. Similar to other tracks, I-70 Speedway in Odessa, Missouri, trimmed its schedule from 29 to 23 races (fans and racecar haulers commuting to fewer races saved more fuel than the racecars), and New Smyrna Speedway in Florida trimmed its Winter Speedweeks down from four to two nights of racing. For the 1974 season, the IMCA fair circuit conserved by reducing practice and qualifying time and abbreviating race distances for stock cars. At Tampa's season-opening Winternationals, bus routes set up in conjunction with the state fair promoted spectator conservation, saving about 1,000 gallons of fuel.[25]

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[23] "New Smyrna Speedway Reducing Racing Distance," *Illustrated Speedway News,* 22 January 1974, 10; "Atlanta 500 Trimmed in the Middle by 50-Miles," *Illustrated Speedway News,* 19 March 1974, 9; "Fuel Reductions at Hickory Announced by Ned Jarrett," *Illustrated Speedway News,* 29 January 1974, 9; "I-70 Speedway to Conserve Energy," *Illustrated Speedway News,* 29 January 1974, 6; "I-70 Speedway to Conserve Energy," *Illustrated Speedway News,* 29 January 1974, 6; Winston 500 Energy Cut," *National Speed Sport News,* 13 February 1974, 8; "Opportunity for Pocono Race Fans," *National Speed Sport News,* 6 February 1974, 3.

[24] "Pocono Raceway Doing Part in Conservation," *Illustrated Speedway News,* 29 January 1974, 8.

[25] "ARDC Car Pool Plans Being Formulated for Coming Season," *Illustrated Speedway News,* 19 March 1974, 9; "Voluntary Energy Cuts Announced by National Speedways," *Illustrated Speedway News,* 22 January 1974, 5; "Plenty of Racing Fuel for Tampa Sprint Meet," *National Speed Sport News,* 8 July 1975, 14; "Short-Track Racing

Despite these actions, the fuel crisis took a toll on lower-level forms of racing. High fuel costs hurt competitors who needed race fuel for the track and gasoline or diesel to fill up their haulers to get to and from the speedway. Not only did fans deal with rationing, and long, irritating lines at the pump, they felt the pinch of the oil embargo in their disposable incomes and enjoyed fewer outings at the races. The crisis brought the checkered flag for some speedways. A combination of environmental, geographical, and economical factors forced Devil's Bowl Speedway in West Haven, Vermont, to permanently lock its gates. Although the track's isolated location ensured survivability from suburban sprawl, gas prices prevented fans from driving the 90 once-carefree miles out from Albany, New York, and Burlington, Vermont. Devil's Bowl never recovered and closed in 1977.[26]

The Oil Embargo concluded in March 1974, and once fuel concerns stabilized, racing recovered in 1975 with higher attendance figures. Nearly all major sanctioning bodies reflected this gain.[27] Still, the crisis contributed to the end of some entities. The embargo and permanently higher gasoline prices (which climbed to over 60 cents in some places during 1975, and well over one-dollar per gallon by late 1979) directly affected regional, weekly traveling series. For instance, inaugurated in 1970, the All-Star Circuit of Champions was a short-lived, but successful, regional touring sprint car entity. However, the oil crisis crippled the touring aspect, and the series shut down after the 1974 season. Moreover, the embargo also hurt Northeastern-style supermodified racing, which at that time was relatively young and confined to tracks in New England and New York State. The supermodified "hub" of Oswego, New York

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Adds Little to Fuel Shortage," *National Speed Sport News,* 19 December 1973, 28; "Grandview Establishes Energy Program," *Illustrated Speedway News,* 22 January 1974, 5; "Sel-Wil Op Urges Carpools, Buses Planned," *National Speed Sport News,* 9 January 1974, 3, 10.

[26] "Devil's Bowl Rings Down the Curtain," *Illustrated Speedway News,* 8 August 1978, 5.

[27] *Daytona 500 1976 Official Program,* 86.

(near Lake Ontario), which attracted drivers from all across the Northeast, became more of a local venue through the rest of the decade.[28]

NASCAR, which resumed full race distances in July of 1974, emerged from the crisis as the Phoenix of motorsports. The Frances, both father and son, patriotic-like initiatives during an American crisis won NASCAR respect in the political community and among Americans who were not necessarily fans of motorsports.[29] The younger France stated, "we feel it is important to cooperate with the Government's request and to exceed the 25 percent overall cut if possible."[30] The reduction of races, although mostly symbolic, resonated well with NASCAR's generally conservative fan base (the same fan base targeted by GOP strategists). The actions taken by the motorsports community represented not only a patriotic stance but also the "embryonic" stages of an environmental consciousness in racing—and good publicity. As retired NASCAR star Benny Parsons reflected in 2006:

> I think that was basically a PR move back then because they cut back the length of the races only 10 percent. So instead of a 500-mile race, it would be a 450-mile race. What we are talking about saving is a few gallons, probably no more than a 100 or 200 gallons. That's just simply a drop in the ocean as to what we need to really conserve in this country.[31]

The "green" measures taken by the auto racing community outside of the actual races were more apparent and proactive in stemming demurrals from the sport's critics. Still, despite the willingness of auto racing competitors, track owners, and executives to curtail energy use, American motorsports as a whole was more hesitant than it could have been to embrace a golden

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[28] Lou Modestino, "The 1969 Oswego Classic," *Stock Car Racing*, December 1969, 46-49; Bruce Ellis, "The All Star League," *Open Wheel*, August 1982, 76-78; Rob Sneddon, "Bert Amick," *Open Wheel*, March 1996, 64-70; Dick Berggren, "Supermodifieds: A Dead Class at Oswego," *Open Wheel*, February 1982, 32-33, 82.

[29] "10% Race Distance Cut Rescinded by NASCAR," *National Speed Sport News*, 26 June 1974, 2.

[30] "Daytona Speed Weeks Events Cutback in Energy Conservation Measure," *Illustrated Speedway News*, 8 January 1974, 5.

[31] Jeff Hood, "Nobody's Fuel," *Cherokee (North Carolina) Sentinel*, 11 January 2006.

opportunity to voluntarily eliminate leaded fuel or silence cars. Fans did not complain—smells and sounds were essential components of the aesthetic of racing. Non-fans, however, started to criticize these elements—some aimed to eliminate them altogether.

After World War II, influential books, such as William Vogt's *Road to Survival* (1947) and Fairfield Osborn's *Our Plundered Planet* (1948), enlarged the public's awareness of the human relationship with the Earth. Other works such as Lewis Herber's dull but informative 1962 *Our Synthetic Environment* contributed to a growing American environmental consciousness, and that same year, the publication of Rachel Carson's massively popular *Silent Spring* woke up a large segment of the general population to the harmful effects of pesticides on the ecosystem, and the realities of a worsening toxic environment for humans and non-humans alike. In 1969, a major oil spill off the coast of Santa Barbara, California, brought pictures of oil-soaked birds to televisions. That same year, in Cleveland, Ohio, the polluted waters of the Cuyahoga River literally caught fire. At the end of 1969, grassroots activism, a bi-partisan coalition of state and local government officials, aided by the print media stopped the bulldozers at a massive 39-square-mile jetport proposal in the Big Cypress region of south Florida. During this time, the mainstream media stepped up its coverage of environmental developments. This was significant. As eco-writer Phillip Shabecoff points out, *the New York Times* still lacked a full-time environmental reporter in 1970; the combined impact of an aroused media and public was consequential.[32]

[32] Shabecoff, *A Fierce Green Fire*, xiv. For more details of post-World II emerging environmental awareness also see, Kirkpatrick Sale, *Green Revolution: The American Environmental Movement, 1962-1992* (New York: Hill and Wang, 1993) and Gottlieb, *Forcing the Spring*. For more thorough discussions of the jetport battle, see John E. Laird, "The Politics of Arrogance: A Case Study of the Controversy over the Proposed Everglades Jetport, 1967-1970," (1972); Luther Carter, *The Florida Experience: Land and Water Policy in a Growth State* (Baltimore: Johns Hopkins, 1974); Jack E. Davis, *An Everglades Providence: Marjory Stoneman Douglas and the American Environmental* Century (Athens: University of Georgia Press, 2009).

In 1970, the federal government enacted sweeping environmental legislation and regulation. From 1970 through 1974, what became known as President Richard M. Nixon administration's green wave stemmed primarily from the efforts to outdo an environmentally mindful Congress, (most notable senators Henry Jackson (D) Washington, Edmund Muskie (R) Maine, and Gaylord Nelson (D) Wisconsin). Passed on January 1, 1970, the National Environmental Policy Act of 1969 aimed "to declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality." Responding with an executive order, Nixon created the Environmental Protection Agency (EPA), which began operations on December 2, 1970, and became the "watchdog" of the federal government's new environmental policy.[33]

By the 1970s, the environmental movement had blossomed into a large-scale popular movement. As more people became environmentally minded, grassroots campaigns multiplied. New environmental groups formed and existing older groups gained new members. Together, they and the American public organized an unprecedented event, the first Earth Day, held on April 22, 1970. Coast to coast, over 20 million people participated in the successful event, illustrating a vibrant and growing environmental consciousness throughout the nation. Jack Gould of the *New York Times* observed:

> Earth day dominated much of television yesterday and covered almost every aspect of mankind's health and environment—pollution from automotive exhaust, litter on the

[33] Gottlieb, *Forcing the Spring*, 126-146; Shabecoff, *A Fierce Green Fire*, 103-139. J. Brooks Flippen, *Nixon and the Environment* (Albuquerque: University of New Mexico Press, 2000); "Nixon Signs Bill to Prevent Sea Oil Spills, Urges Action on 20 Other Ecology Measures," *Wall Street Journal*, 11 July 1972, 9.

> highways and streets, venereal disease, the fouling of rivers with industrial waste, and the ruination of homes and pasturelands by avaricious strip coal miners. . . . On the political scene there were expressions of hope that the nation's youth, represented by 22,000 colleges and school systems, would sustain the campaign for the preservation of an unspoiled environment.[34]

Environmental concerns resonated through American politics. Politicians added environmental issues to their planks, and votes of environmentally mindful citizens affected elections, particularly at the state level. The automobile's contributions to the toxic environment—smog, lead-borne exhaust, and noise—motivated Earth Day organizers, hundreds of whom demonstrated clad in gas masks or by taking sledgehammers to an automobile, symbol of American indulgence, excess, and the ailing earth.[35]

A few years earlier, Ralph Nader addressed such issues in his groundbreaking exposé *Unsafe at Any Speed: The Designed-In Dangers of the American Automobile* (1965). Nader was especially compelling in his thoroughly researched critique of the automobile industry's safety record—pointing out the dangers of inadequate seatbelts, mirrors, windshields, and exhaust systems. As historian Robert Gottlieb observes, Nader "identified a public interest rather than a conservationist perspective, [and] combined intense research efforts with direct advocy work."[36] Nader set up a foundation in Washington, D.C., and rallied graduate students and young professionals to fight pollution, promote responsible development, and generate consumer awareness. "Nader's Raiders" combined science with grassroots activism and embodied the emerging environmental consciousness. They joined countless environmentalists, ecologists,

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[34] Jack Gould, "TV: The Campaign for an Unspoiled Environment," *New York Times*, 23 April 1970.

[35] Burt Schorr, "New Campus Cause," *Wall Street Journal*, 17 February 1970; Richard Harwood, "Earth Day Stirs Nation," *Washington Post*, 23 April 1970; Gladwin Hill, Earth Day Theme Continues in U.S." *New York Times*, 24 April 1970; John Kifner, "Earth Day Group Zeros in on Autos," *New York Times*, 20 July 1970; Gladwin Hill, "Ecology Emerges as Issue in Many of Nation's Races," *New York Times*, 27 September 1970; Edward P. Morgan, "1970—the Year Private Citizens Got Mad," *Washington Post*, 26 December 1970; Gaylord Nelson, *Beyond Earth Day: Fulfilling the Promise* (University of Wisconsin Press, 2002); Sale, *The Green Revolution*.

[36] Gottlieb, *Forcing the Spring*, 127.

and economists in the early 1970s, who inevitably directed much of their focus and criticism directly toward automobiles.[37]

Congress noticed as well. The Clean Air Act, signed into law in December of 1970, mandated a sweeping set of stricter federal guidelines regarding airborne waste discharges. This act replaced weaker legislation from the 1960s and its successful passing, in part, stemmed from the efforts of regional and local groups who pressed for better air quality in their respective communities. Automotive exhaust was a hot topic during congressional hearings leading up to the Clean Air Act. Tetraethyl lead, the king gasoline additive for over 50 years, was one of the earliest "casualties" of the landmark legislation.[38]

Tetraethyl lead's staying power was attributed to the lead industry's firm stranglehold on occupational science. Since the 1920s, Christian Warren notes, "industry-owned or –financed centers conducted the most influential" public health studies related to lead.[39] Throughout the 1960s, concerned Americans—second-generation victims of tetraethyl lead-poisoning—took notice of lead-based paint's horrible health effects on young children, and more aggressively criticized the substance. The lead industry fought back. "Manufacturers could argue," Warren points out, "that unlike the now discredited lead paint, tetraethyl lead was a strategic product whose loss would have serious repercussions in the petroleum and automotive industries."[40]

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[37] Ralph Nader, *Unsafe at Any Speed: The Designed-in Dangers of the American Automobile* (New York: Pocket Books, 1965); Nader, *Power and Land in California*; Art Seidenbaum, "And Wait'll what You Hear what Ralph Nader and His Boys have to Say about California Land Development," *Los Angeles Times*, 4 October 1970; Gladwin Hill, ". . . .as the Environmentalists Put on the Pressure," *New York Times*, 4 April 1971.

[38] For example, Scott Hamilton Dewey, "Is This What We Came to Florida For?" Florida Women and the Fight Against Air Pollution in the 1960s," in *Making Waves: Female Activists in Twentieth-Century Florida*, eds. Jack E. Davis and Kari Frederickson, 197-228. (Gainesville: University Press of Florida, 2003). Gottlieb, *Forcing the Spring*, 126-146; "Clean Air and Automobility," *Washington Post*, 5 August 1970.

[39] Warren, *Brush with Death*, 129.

[40] Warren, *Brush with Death*, 208.

Nearly every gas pump in America, except for Amoco's premium grade, the so-called white gas, delivered leaded fuel into domestic automobiles, and over 70 percent of the lead in the environment. Even in September 1970, John Kimberley executive director of the Lead Industries Association omnipotently declared that "there is no evidence that lead in the atmosphere from autos or any other source, poses a health hazard."[41] The lead industry—aggressively defended its poisonous product—claiming that newer additives would cause greater atmospheric and health problems.[42]

However, by 1970 tetraethyl lead's death knell finally arrived in the United States. Reducing toxic auto emissions was a major early EPA objective, and at that time, catalytic converters became standard components of an automobile's exhaust system. The converters minimized toxicity of emissions, but more importantly, this new gadget—incompatible with tetraethyl lead—"forced out" old technology.[43] The Clean Air Act's phase out of leaded fuel began in 1970, and in February 1972, the EPA mandated a set of guidelines for the gradual reduction of the amount of lead in gasoline beginning on January 1, 1974. Unleaded fuel rapidly appeared at more gas stations, and the automotive infrastructure shifted permanently to unleaded technology the following year. Federal and state guidelines such as the Energy Policy and Conservation Act (1975) called for Corporate Average Fuel Economy (CAFE) standards, aiming

[41] David Bird, "Industry Defends Lead in Gasoline," *New York Times*, 25 September 1970.

[42] Warren, *Brush with Death*, 205-6; Joshua Lederberg, "Ample Evidence for Taking the Lead Out of Gasoline," *Washington Post*, 17 January 1970.

[43] Elsie Carter, "Reduced Lead Content in Gasoline Ordered by EPA for Public Health," *Washington Post*, 23 February 1972; Sharon Silke Carty, "A Great Moment for Cleaner Cars—Catalytic Converters Honored," *USA Today*, 21 October 2008.

to make engines both cleaner and more efficient. Catalytic converters became mandatory on all automobiles produced after 1975.[44]

The lead industry put up one last stand, keeping lead's inevitable phase out a long, drawn out process tied up in federal courts during the 1970s. The nail in the coffin—a 1976 five to four Court of Appeals decision declared that the EPA had the authority to phase out lead.[45] As Circuit Judge J. Skelly Wright stated for the majority:

> Lead from gasoline engines accounts for about 90 percent of the lead in the air. 'Watchdog' agencies such as the EPA have a duty to 'warn us, and protect us, when technological 'advances' present dangers unappreciated—or unrevealed—by their supporters.[46]

For the next ten years, the maximum allowable amount of lead per gallon was reduced to 1.1 grams. As of January 1, 1986, the amount declined to .05, and by 1988 to .01 grams. The ban of the sale of leaded fuel for highway use became official on January 1, 1996.[47] The phase-out, by no means, was smooth and swift. Many consumers balked; leaded fuel (known as regular) often was cheaper than unleaded fuel at commercial gas pumps in the 1980s and to save money, consumers tended to use the dated fuel to power their older automobiles. Nevertheless, leaded fuel eventually disappeared from commercial automobiles, remaining legal in two notable areas, airplanes and racecars. Motorsports gained an exemption from the Clean Air Act's

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[44] Dan Fisher, "Detroit Shifts to Fuel Injectors to Cut Smog," *Los Angeles Times,* 11 January 1970; Bob Irvin, "EPA's Ruling Pleases No One," *Competition Press and Autoweek,* 5 May 1973, 8; "UAW Asks Cleaner Car Engine," *Washington Post,* 22 April 1970.

[45] "The Ruling on Leaded Gasoline," *Washington Post,* 8 February 1975.

[46] Timothy S. Robinson, "Court Backs EPA Curb on Lead in Gas," *Washington Post,* 20 March 1976.

[47] Cass Peterson, "EPA is Considering Ban on Leaded Gasoline, Ruckelshaus Says," *Washington Post,* 29 February 1984; Andy Pasztor, "EPA Plans Rules to Speed the Phase-Out of Leaded Gasoline; Some Firms Opposed," *Wall Street Journal,* 1 March 1984; Warren Brown, "End Nears for Leaded Gasoline—and for Bargain Fuel Prices," *Washington Post,* 29 December 1985; Philip Shabecoff, "New Limits on Lead in Gasoline are Planned, E.P.A. Officials Say," *New York Times,* 21 July 1984.

tetraethyl lead ban, and some entities, such as NASCAR, permitted leaded fuel well into the next century.[48]

Racing technology could be contradictory. On one hand, better racecar design and more effective helmets and equipment enhanced safety. On the other hand, racecars generated earsplitting noise and some burned leaded fuel. In 1952, Pure Oil Company of Illinois became the sole fuel provider to NASCAR and commercially developed and distributed a specific blend of racing fuel, free of charge (and mandatory), to participants. Chemists continually changed and experimented with gasoline blends as engines became more powerful, necessitating additional octane. Throughout the 1970s and beyond, lead remained in some types of racing gasoline to increase octane and lubricate engine components.[49]

Nevertheless, some forms of motorsports, long ago, moved past gasoline, switching to higher-octane methanol fuel. This non-potable version of alcohol is derived from natural gas, coal, or wood (sometimes known as "wood alcohol"), and became the fuel of choice for many open-wheel racecars after World War II. USAC made methanol mandatory because of safety. After a grisly gasoline fire during the 1964 Indianapolis 500 killed two drivers (Eddie Sachs and Dave MacDonald), the sanctioning body permanently switched all open-wheel racecars to alcohol fuel. Methanol does not ignite as easily as gasoline, and the alcohol fire can be extinguished with water without inflating the conflagration. Wood-derived methanol is renewable; coal- and natural gas-produced methanol is not. The major drawbacks—methanol burns invisibly and produces a poisonous exhaust. Drivers cannot withstand the fumes if the

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[48] Peter Bohr, "Ruling Curbs EPA Action on Leaded-Gas Use," *Washington Post*, 1 March 1982.

[49] Pure and Standard merged in 1965 creating Unocal. Tim Wusz, "Gasoline for NASCAR Stock Car Racing: 1951-1994," *Motor Sports Engineering Conference and Exposition Conference Proceedings*, 1994, 265-278; Deb Williams, "Farewell to a Friend," *NASCAR Winston Cup Scene*, 20 February 2003, 36-37.

racecar is stationary or moving slowly, and formaldehyde accumulation is a toxic by-product of burned methanol deposits.[50]

In the 1970s, alcohol fuel made a tentative comeback in the domestic arena. Ethanol's long-time role as a performance booster in racecars transferred over to commercial automobiles in the late 1970s. Low fuel prices after World War II brought the promotion and production of ethanol in the United States to a virtual standstill. However, 1970s energy concerns and Middle Eastern instability generated a renewed attentiveness for fossil fuel alternatives. And as cleaner air became a national priority, ethanol and methanol advocates touted alcohol's cleaner-burning properties. Most alcohol proponents acknowledged that ethanol-enriched gasoline was not a "silver bullet," but a means of stretching America's fuel supply, decrease knock, and reduce "harmful exhaust emissions." As in the late 1930s, "Gasohol" first appeared at Midwestern service stations. This concoction—which eliminated the need for tetraethyl lead—was gasoline enriched with ethanol, in the neighborhood of ten percent.

Energy costs crushed farmers in the 1970s, and as in the 1930s, the use of corn for fuel helped improve their plight. As energy historians Hal Bernton, Scott Skylar, and William Kovarik contended, "by the end of the decade, the movement for small-scale alcohol fuels production had spread across rural America with the speed of a wind-whipped prairie fire, sparking a rebirth in the ancient art of moonshining unequaled since the prohibition era."[51] Although the "permanent" problem of ethanol's potential for human consumption remained, the federal government decreased regulations on the production of ethyl alcohol for fuel, enforcing the use of denaturants to keep the fluid out of liquor cabinets. The ethanol lobby slowly amassed

[50] "Gasoline Out of Favor in Indy," *Illustrated Speedway News*, 2 June 1970, 4.

[51] Bernton, Kovarik, and Sklar, *Forbidden Fuel*, 36.

influence within the Beltway and Midwestern politicians began seeking subsides and tax breaks to produce ethanol, thus remedying their state's agricultural and economical woes. Federal alcohol subsidies began in 1978 and continued into the twenty-first century. As the demand for alternative fuels spiked up again the following year due to the Iranian Oil Embargo, ethanol plants sprouted up in the Midwest. A problem facing the current ethanol market, critics have always argued that ethanol was not worth the price of its production, regardless of federal subsidies and tax incentives. Ethanol remained largely absent from American motorsports during the 1980s and 90s, but, as a cleaner-burning octane booster, infiltrated the Midwestern market as one of tetraethyl lead's main replacements.[52]

Since the earliest days of automobile, noise, the other pollution, fueled critics. Complaints never ceased and the automobile thrived as roads grew more crowded and turned into unofficial speedways. Organized motorsports, featuring high-powered, un-muffled engines were among the earliest producers of noise pollution. In fact, excessive noise created by high-powered racecars contributed to the demise of racing on municipal streets before World War I. Midget racing, a high-pitched motorsport that initially thrived in urban areas eventually disappeared from the cities. Ovals kept racecar noise confined to a much smaller area than street courses, but inhabitants who happened to reside near a motorsports facility complained about noise. With sprawl came noise and new suburban homeowners were unaccommodating when eardrum-smashing roars emanated from racetracks on nights when many suburbanites preferred to relax in

[52] Bernton, Kovarik, and Sklar, *Forbidden Fuel,* "Alcohol-Gas Mixture Called Key to Energy Independence," *Los Angeles Times,* 18 November 1974; Ward Sinclair, "Gasohol: Moral Equivalent of Moonshine," *Washington Post,* 4 August 1979; Phil McCombs, "Gasohol Proves Popular in Area and Nationwide," *Washington Post,* 6 June 1980; Ward Sinclair, "Fuel for the Future," *Washington Post,* 12 June 1981.

the quiet of their homes in front of a Saturday-night televised variety show or with friends around the backyard barbecue.[53]

Congress's passage of the Federal Noise Abatement Act of 1972 was a major, yet less publicized, environmental initiative during the Nixon era. This legislation, sponsored by Democrat Congressman Paul Rogers of Florida, passed in the same year as the more famous Clean Water Act and provided federal oversight to address the fact "that inadequately controlled noise presents a growing danger to the health and welfare of the nation's population."[54] During Congressional hearings, motorsports-generated noise came up on a few occasions, and the sport earned yet another environmental exemption. Among the Act's provisions, ". . . it is the intent of the Committee that the administrator will not designate as a 'major source of noise' vehicles or engines . . . which are manufactured or modified for, or utilized exclusively in organized competitive off-highway motorsports events."[55]

As Robert Alex Barron stated in a *McCall's* article in 1968, "air pollution kills us slowly but silently; noise makes each day a torment."[56] Noise, although merely an inconvenience to some, is unhealthy. The cardiovascular system, for example, thrives in quiet. Theodore Bertrand authored a pioneering noise pollution study in 1970. In *The Fight for Quiet*, he explained that "noise . . . can affect the heart directly through some nervous system stimulation,

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[53] Literature on noise pollution is sparse until the early 1970s. David M. Lipscomb, *Noise: the Unwanted Sounds* (Chicago, Nelson-Hall, 1974); "Fan Action Urged to Combat Noise Threat to Racing," *National Speed Sport News*, 26 May 1976, 2.

[54] "Noise Control Powers for EPA Voted by House, *Wall Street Journal*, 1 March 1972, 2; Noise Control Act of 1972, 27 October 1972, P.L. 92-574, 86 Stat. 1234 2328. Noise studies lack in academia. Peter A. Coates, "The Strange Stillness of the Past: Toward an Environmental History of Sound and Noise," *Environmental History* 10 (October 2005): 635-664.

[55] Noise Control Act of 1972, 27 October 1972, P.L. 92-574, 86 Stat. 1234 2388.

[56] Bertrand, *The Fight for Quiet*, 149.

and indirectly by changing the dynamics of the vascular system."[57] Extreme or sudden noise can affect blood vessels and capillaries in the head and eyes, bringing on headaches.

Despite the fact that homeowners often knowingly bought property in close proximity to motorsports venues, these new residents moved away from the city expecting all of the amenities of suburban life, which included quiet. Rarely did real-estate agents show homes near racetracks to prospective buyers on Friday or Saturday evenings when grassroots racing took place. The closure of a racetrack had short-term negative economic aspects for a community and surrounding locales. Concession stand workers, for example, might lose their source of summer employment. But, a shut-down speedway often resulted in property-value escalations and the growth of a community.[58]

During the 1970s, noise pollution united an increasing number of Americans in a quest for quiet. Citizens mobilized and mounted political and legal action with greater frequency and growing effectiveness, and victories over noise pollution often came at the expense of a local speedway. Despite the federal exemption, states and municipalities targeted racetracks and circumvented the national act. New suburbanites, vitalized by the environmental movement and the Noise Abatement Act, went after their unwelcome neighbors and aided in the closures of short tracks in places such as Pine Brook, New Jersey; Islip, New York; Reading, Pennsylvania; Albuquerque, New Mexico; and Salt Lake City, Utah. Noise killed tracks before sprawl engulfed the facilities. Noise, in essence, hastened the inevitable demise of tracks in these and countless other markets. The proliferation of noise statutes also motivated track owners, to an even larger to degree, to sell their property, thus opening the land for "quiet" commercial and

[57] Bertrand, *The Fight for Quiet*, 101.

[58] "NY Court Prevents Onteora Reopening," *National Speed Sport News*, 17 August 1977, 5.

residential development. Battles had mixed results; usually, but not always, the racetrack fell on the losing end.[59]

Sprawl and noise constituted a formidable one-two punch. As touched on earlier, Maryland's Beltsville Speedway was a poor racetrack location. Since the facility's inception in 1965, local citizens complained about noise, traffic, and boisterous race fan behavior. In 1971, an 11 p. m. curfew was instituted. Track owners, forced to comply, oversaw the construction of a 20-foot high sound-retaining wall constructed of unsightly plywood and telephone poles (at a reported cost of $10,000). The contraption—marginally effective—resulted in a mere five-decibel reduction. Complaints continued.[60]

In 1972, Beltsville implemented a muffler requirement. The required muffling of loud engines decreased the spectacle appeal of attending races in person. Mufflers made racers quieter, but not silent. Mufflers are the antithesis of maximum horsepower and slowed the cars to a degree. Missing the full aesthetic of racing, fans initially drifted away from the "quieter" speedway, but the rule was experimented with—different types of mufflers with different placement on the cars. Races remained competitive since muffled cars affected engine performance indiscriminately, but with less noise and less horsepower. But, mufflers did change the sport. Racers always adopted to rule changes, and mufflers simply added another element to the timeless tinker. Instead of tinkering solely for speed, racers and mechanics tinkered for

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[59] "Ohio Speedways Organize to Protect Interests," *Illustrated Speedway News,* 19 March 1974, 8; "Muffled Stocks Sunday at Tri-County Track," *National Speed Sport News,* 27 February 1974, 3; "Noise May Shutter Track," *National Speed Sport News,* 26 April 1978, 2; "Neighbors May Close Famed Islip Speedway," *National Speed Sport News,* 13 August 1980, 3, 22; "Last-Ever Reading Race Friday," *National Speed Sport News,* 27 June 1979, 8; Mike Kerchner, "Reading, Part I," *National Speed Sport News,* 10 August 2005, 14.

[60] The track received one-year permits since its opening in 1965. "Permit Given to Beltsville," *Washington Post,* 19 March 1970; David Bourdon, "Beltsville Prospers Despite Mounting Problems," *Washington Post,* 15 July 1969; "Speedway Permit Renewal Argues in Prince George's," *Washington Post,* 7 March 1970; Venlo Wolfsohn, "Commission Threatens Start of Beltsville Meet," *Washington Post,* 13 March 1970; Shelby Coffey, "All's Quieter on the Beltsville Speedway Front," *Washington Post,* 2 April 1972; Venlo Wolfsohn, "Costs Force Belleville Track to Cut Short Stock Car Season," *Washington Post,* 28 August 1977.

silence while trying to preserve speed. Although crowds initially shrank, fans returned to watch the muffled racecars, and the wall, curfew, and mufflers extended the life of the Beltsville Speedway until 1978. The Maryland example indicated the trend. Eventually fans and competitors accepted mufflers and curfews either by force or out of necessity. Despite the track owner's tireless efforts to accommodate community noise concerns, by the late 1970s, Beltway sprawl (and a slumping American economy) put Beltsville out of business.[61]

The "dirt-track" state of Illinois was one of the most complex motorsports and noise pollution battlegrounds. This predominately rural state took the strongest action at the state level, and many in the racing community feared that the state where American auto racing got its start might become 80 years later the first to lose the sport. In the same year of the Federal Noise Abatement Act in 1972, the Illinois Environmental Protection Agency (IEPA) authored a new statewide noise pollution law and forwarded the proposal to the Illinois Pollution Control Board's (IPCB) for consideration. The crux of the law mandated a 61-decibel limit "at the property line of the receiver." The measure was well below racecar-generated noise and

[61] Venlo Wolfsohn, "NASCAR Races Feature First Program at Baltimore-Washington Speedway," *Washington Post*, 20 July 1965, D-3; Venlo Wolfsohn, "Beltsville Track Offers NASCAR Race Wednesday," *Washington Post*, 24 August 1965, C-2; "Costs Force Beltsville Track to Cut Short Stock Season," *Washington Post*, 28 August 1978, 41; Venlo Wolfsohn, "Rabold Drives Porsche to Victory at Marlboro," *Washington Post*, 22 September 1968, C-10; "A Guide to all of those Noisy Cars and Where They Race," *Washington Post*, 4 May 1969, 274; e-mail correspondence with Al Stilley, 20 October 2008; Wolfsohn interview by author; USAC Orders Mufflers on all Stock Cars Starting at Milwaukee July 10," *National Speed Sport News*, 22 June 1977, 3; Shelby Coffey, "All's Quieter on the Beltsville Speedway front," *Washington Post*, 2 April 1972, F-8; "Mufflers Mandatory," *National Speed Sport News*, 17 April 1974, 13; Mufflers Mandatory at Grandview," *Illustrated Speedway News*, 10 January 1978, 17; Polly Roat, "Mufflers get OK from Golden Gate Fans," *Illustrated Speedway News*, 7 May 1974, 4; "Mufflers required for Florida sprints," *Illustrated Speedway News*, 13 December 1977, 2; "ARDC Board of Directors Announce New Specs for Competitors," *Illustrated Speedway News*, 10 January 1978, 12. Dennis Thompson, "Mufflers, Physicals a Must for Busy Badger Midgeteers," *National Speed Sport News*, 12 April 1978, 11; Jim Donnelly, "The Silent Treatment," *Stock Car Racing*, June 1986, 84-89; A good commentary on the effects of racecar noise on hearing is Paul Van Valkenburgh, "Real Racers Wear Protection," *Racer*, April 1995, 86. In 1977, USAC muffled their stock cars.

according to one racing publication, the 61-decibel limit equaled "what one might hear in a business office in which adding machines and typewriters are used."[62]

It initially appeared, according to newspaper and racing publication accounts in 1972, that as in the federal law, the state (IPCB) would grant Illinois motorsports immunity from the statutes. Apparently, when the IEPA forwarded the bill that agency recommended a motorsports exemption. On June 15, 1973, however, the ICPB denied its sister agency's recommendation.[63] The original regulation (R74-2), adopted by the ICPB in July 26, 1973, stated that "noise levels may not exceed 61 decibels at the property line of the receiver" –a nearly impossible requirement for track owners.[64]

This statewide regulation threatened all tracks—even "innocent" tracks located in isolated pockets of Illinois, where miles of corn extended to the property line of the receiver. Despite existing on municipal- and state-owned land, county and state fairs received no preferential treatment over the privately held facilities. The ICPB granted motorsports facilities a two-year grace period to comply with this nearly impossible requirement (which the addition of mufflers and sound retaining walls would not accomplish) and during this time develop a counterproposal and work toward improving their current ineffective noise-abatement measures.[65]

Mobilizing promoters, racing entities, drivers, and fans formed the Association for Motorsports (AMS) in 1973 to fight the statewide noise law. Concerned with the possibility of

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[62] "Board Ignores Plea, Illini Racing Again in 'Sound' Jeopardy," *National Speed Sport News,* 4 July 1973, 2; "Iowa Busiest U.S. Racing State," *National Speed Sport News,* 4 July 1973, 2.

[63] ICPB officials were appointed by the governor. The IEPA is the "enforcement arm" of the IPCB. Phil Pash, "Bid by Illinois to Muffle Tracks Stirs a Storm," *New York Times,* 3 August 1975.

[64] According to Martin Wyant, "Board Mulls Effect of Noise Curbs," *Chicago Tribune,* 23 July 1973, consideration for an exemption was still being made by Sam Lawton and the ICPB a few days before R74-2's passing on July 26. Stilley, "Noise and the Illinois Racetrack."

[65] This was a conflict of state agencies (the Illinois Fair Board and ICPB). Casey Bukro, "Noise, Gas Crisis Cited for Auto Racing Curbs," *Chicago Tribune,* 14 June 1974.

losing sprint, midget, and stock car events in Illinois, USAC president Reynold MacDonald helped organize the AMS (Illinois was a USAC stronghold). As was the case in the fuel crisis, environmental concerns created new alliances, and track owners, racers, and fans united in an effort to protect their sport. As was the case with oil embargo, the Illinois noise issue bound together all varieties of motorsports interests.[66]

The national racing community watched this statewide battle closely—only California and Pennsylvania had more speedways than Illinois. At that time, the IEPA (the initial sponsor of R74-2) and AMS formed a peculiar recreational/economical/environmental/governmental connection, and as *National Speed Sport News* stated, "an enemy became an ally." The AMS and IEPA attempted to modify to R74-2. In February 1974, the two groups proposed (R74-4) to exempt racing from the 61-decibel regulation if races concluded by 10:30 PM. Part of this counterproposal required facilities to monitor and submit their decibel measures to the state. As R74-4 awaited a decision, the July 1975 deadline came and passed, but apparently with no fines handed down by the ICPB. Eventually, the ICPB dismissed the counterproposal (R74-4) on August 28, 1975, but granted the AMS and IEPA a February 10, 1976 extension, while requesting yet another counterproposal.[67]

The 1975 season continued as the IEPA, ICPB, and AMS searched for an amicable solution. A protest march sponsored by the AMS, and organized by Dr. Thomas Cronin, took place on December 2, 1975, which *National Speed Sport News* reporter John McKarns described

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[66] "AMS Target is Unfair Legislation on Noise," *National Speed Sport News,* 17 October 1973, 2; "New Proposal would Exempt Illinois from Noise Regulations," *Illustrated Speedway News,* 12 February 1974, 12.

[67] Casey Bukro, "Noise, Gas Crisis Cited for Auto Racing Curbs," *Chicago Tribune,* 14 June 1973; "Noise Remains an Illini Issue, *National Speed Sport News,* 23 April, 1975, 3, 13; "Auto Racing Exempt from Pollution Laws," *National Speed Sport News,* 20 June 1975, 2, 21.

as a demonstration that was "perhaps a first in auto racing."[68] This example of motorsports-based grassroots activism unfolded at the University of Illinois at Chicago on the same day ICPB-sponsored public hearings took place over motorsports noise issues. The protest march and debates captured Chicago-area television coverage. According to McKarns, the IEPA "continued to be contacted by other states requesting information on the proposed regulations and current status of this issue in Illinois."[69]

For the 1976 season, the AMS continued working with state officials under the supervision of yet another entity, the Illinois Institute for Environmental Quality (IIEQ). This state-sponsored group (which operated in conjunction with Northwestern University) was comprised of motorsports personalities, academicians, and government officials. The committee studied auto racing's economic impact on Illinois, investigated how other states addressed auto racing noise issues, and examined how different types of race cars and mufflers produced and abated sound, respectively.[70]

Today, environmental and economical impact studies are required to build racetracks. The detailed, state-sponsored IIEQ report—perhaps the first of its kind—concluded that 3.2 million people attended auto races in Illinois in 1974. The study pointed out that the end of racing in Illinois would result in lost revenues, affecting the motorsports sector and the hotel and restaurant industry as well. The AMS, IEPA, and other racing proponents rightfully argued that these environmental regulations (or more specifically the elimination of motorsports) would have significant economic affects on local communities. This report did not necessarily save racing

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[68] "Protest March is Scheduled," *National Speed Sport News*, 26 November 1975, 3.

[69] John R. McKarns, "Illinois Racing Noise Problems Persist Following Protest March and Hearing," *National Speed Sport News*, 10 December 1975, 3, 11.

[70] Illinois Institute for Environmental Quality, "Economic Analysis of Environmental Regulation in the Racing Industry," October 1976.

from extinction in the state, but clearly provided vital economic and environmental information favoring motorsports. The Illinois battle over motorsports and noise intertwined environmental cost with economics, and here again was a connection that characterized motorsports in the 1970s. As in the fuel crisis, auto racing entities armed with ammunition pointing toward favorable economic and social impact with minimal environmental impact. [71]

The latest proposal (R75-11), also introduced the previous year in summer of 1975, combined most of the aspects of the previous proposal (R74-4), but also broke racing down into four categories: drag, oval, sports, and motorcycle, each with different decibel-reduction requirements. Some cars sprints, midgets, and types of drags would have no muffler rule, but statewide, all forms of motorsports required to cease racing by 10:30. Essentially, R75-11 (again) exempted auto racing from the statewide 61-decibel requirement but with stricter requirements and restrictions. The ICPB finally accepted R75-11 in summer of 1978 and motorsports in Illinois continued exempt of the 61-decibel limit, but with stipulations. Also included in this measure was a three-year grace period to experiment with muffler and other forms of sound-reducing technology, aiming for an eventual overall decrease of sixteen decibels in stock-type racecars (sprints, midgets and some types of drag racers remained exempt). In addition, the AMS and its member tracks had to monitor and report its noise levels and install sound measuring devices. If tracks did not meet requirements they were fined.[72]

Illinois motorsports remained under constant surveillance, and heading into 1980, racecars were a bit quieter and events concluded earlier in the evening. These measures became standard

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[71] *Ibid*. Racetrack closings also threatened *intrastate* commerce because competitors and fans often came from bordering states.

[72] "Illini Noise Rules Eased," *National Speed Sport News*, 2 February 1977, 3; "Ill. Environmental Board Proposes Sound Reduction," *National Speed Sport News*, 20 April 1977, 10; Jack Schwartz, "Speedway Confidential," *Illustrated Speedway News*, 20 September 1978, 12; John C. White, "Speedway, Neighbors Renew Noisy Feud," *Chicago Tribune*, 15 May 1980.

nationwide in coming years. States and communities kept a much closer tab on auto racing noise than in the past. It appeared (with the benefit of hindsight) that the ICPB's tough stance represented that entity's desire to preserve a form of recreation, but also reflected the state government's dedication to make a change to the status quo, while improving the sport's relationship with the environment and the citizenry. Because the ICPB expressed willingness to allow the AMS and the IEPA to develop counterproposals, it appeared that the ICPB's main initiative was to permit motorsports to proceed Illinois, but with an "enforced" environmental consciousness. The ICPB even conceded in 1974 that the 61-decibel "is not economically or technically feasible for motorsports."[73] The timing of these events, in the mid-1970s, came as no surprise.[74]

These brief summaries of the complicated auto racing/noise pollution battles in Maryland, and Illinois showed how environmental issues affected the survival and sustainability of American motorsports.[75] Nearly every week, *National Speed Sport News* and *Illustrated Speedway News* included at least one article updating the status of a battle between a racetrack operator and his or her neighbors. Forced to address civilian noise complaints, promoters attended workshops to gather tips regarding noise abatement and to develop public-friendly policies. Basically, the survival of a racetrack depended on an owner's willingness to cooperate with citizens and government officials, not drivers and fans. Regardless of a track operator's vain attempt to silence the cars and work with the surrounding community, sprawl, and a growing demand for quiet still killed countless speedways.

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[73] "New Proposal would Exempt Illinois from Noise Regulations," *Illustrated Speedway News*, 12 February 1974, 12; "Opening Noise Battle is Won by Racing Group in Illinois," *National Speed Sport News*, 6 February 1974, 3.

[74] "Illinois Noise Rule Now Law; New Proposal Made," *National Speed Sport News*, 13 August 1975, 2, 16.

[75] "Only 3 Race Bodies May Sanction in Ill." *National Speed Sport News*, 2 May 1979, 5.

"Racing with the environment" accelerated in the 1970s. The story of Pittsburgh's famed Heidelberg Raceway typified an "enviro-motorsports chain reaction." Emerging in the Iron City in 1948 as part of the great post-war track building boom, the original dirt facility switched to pavement in the mid-1960s and was gone by 1974. The track owner opted to not renew his lease of the property due to the uncertainty of the energy crisis. Real estate developers quickly scooped up the land. Heidelberg followed a common pattern—dirt track, paved track, demolished track, shopping center plaza. Various environmental factors played out in the birth and death of a track and adjusting to the natural and artificial environment often only delayed the inevitable demise of a speedway.[76]

In the summer of 1980, *Los Angeles Times* reporter Jim Murray reflected that "in 1970, no one foresaw $1.49 gasoline, oil embargoes, 55-mile speed limits. . . . In Dan's [Gurney] heyday, racing machine decals were used to sell oil additives, oil itself, gasoline, and gasoline products in a hotly competitive market."[77] This quote addressed the environmental and economic challenges motorsports faced in the 1970s, but despite hurdles created by fuel, noise, politics, economics, or sprawl, NASCAR distinguished itself by overcoming these obstacles. As these last two chapters illustrated, by 1980, most types of American auto racing underwent change and weakened. NASCAR, however, surged forward unilaterally. By the start of a new decade, the Winston Cup Series was on the verge of a major breakout and well-positioned (for the time being) to weather any economic, political, or environmental challenges on the horizon.[78]

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[76] "Seeks P.R.A. Crown at Heidelberg," *Illustrated Speedway News,* 19 October 1965,4; "Heidelberg 200 to Wayne Bennett," *Illustrated Speedway News,* 19 October, 1965, 3 ; "Colella to Operate Heidelberg Track," *National Speed Sport News,* 17 January 1973, 2; "Farewell Heidelberg," *Auto Racing Monthly Magazine,* June 1975; Kristy Graver, "Memories of Heidelberg's Life in the Fast Lane," *Bridgeville (PA) Area News,* 2 November 2005; Ross Jr., "Racing Against Time."

[77] Jim Murray, "Economic Crunch Slows Dan Gurney to a Walk," *Los Angeles Times,* 22 August 1980.

[78] Shav Glick, "Racing is Running Out of Gas as the '80s Begin," *Los Angeles Times,* 3 January 1980.

CHAPTER 8
PLACES, SPACES, AND RACES: REDUX, (1980-2005)

> We can't stick our heads in the sand and pretend this kind of political and environmental pressure won't happen, because it will. It's not a question of being an environmentalist . . . it's a reality that I believe the sport will have to face.
>
> —*Kyle Petty*[1]

> You can have NASCAR, or you can have the panther, but you cant have both.
>
> —*Dennis Olle*[2]

Most racecars do not look markedly different today than they did in 1980. The status of championship racing, however, is vastly different. After CART's messy split with USAC, the new entity achieved championship racing supremacy. NASCAR-sanctioned stock car racing, in the meantime, was on its way in becoming a national phenomenon. Winston Cup stock car racing found new markets outside the Southeast in the 1980s. Big NASCAR names, such as Darrell Waltrip (three championships) and Dale Earnhardt (seven championships), became more widely recognizable American motorsports figures than CART champions, such as Rick Mears and Tom Sneva.

Although the Daytona 500 steadily drew a larger American television audience, the Indianapolis 500 remained the world's premier motorsports event. In fact—unlike USAC in previous decades—a growing number of foreign drivers, particularly from Europe, Brazil, Mexico, and Japan, competed in CART. Championship racing drifted from its once-strong American identity. The decline in domestic drivers alienated long-time American fans. Throughout the 1980s, championship racing, its schedule consistent, somewhat recovered from

[1] Gordon Kirby, "Forging the Future," *Racer*, December 1993, 18.

[2] Dennis Olle, telephone interview by author, 30 January 2009, in possession of author.

late 1970s chaos, but even stormier clouds loomed on the horizon in the early 1990s.[3] In 1994, Indianapolis Motor Speedway president Tony George (USAC founder Tony Hulman's grandson) created the Indy Racing League (IRL) as a second major open-wheel racing series. He designed the IRL to appeal to American drivers who would climb to Indy via the traditional ladder-system (midgets, sprints, and championship cars). Listening to the open-wheel racing community's complaints about CART's astronomical competition costs, George introduced a unique rules package, reducing engine and chassis prices for his new entity. The committed George made a bona-fide attempt to return championship racing—sans dirt events—back to a more successful era, featuring American drivers racing wicked-fast open-wheel machines exclusively on oval speedways. The inaugural Indy Racing League's season took place in 1996.[4]

George's deep pockets and the Indianapolis 500, which annually attracted over 400,000 fans, kept the IRL afloat during its formative years. Beginning in 1996, the Indianapolis 500 was run under IRL sanction, and CART teams refused to compete at the Brickyard because George guaranteed starting sports to the top 25 highest-ranking drivers in the IRL series. That same Sunday, CART scheduled a much-hyped "competition" race—the U. S. 500—at Michigan International Speedway, about 250 miles north of Indianapolis. Over 100,000 attended CART's

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[3] USAC tried to being back a combination asphalt and dirt championship in 1981, but failed. In the late 1980s, the entity inaugurated a short-lived Indy car "stock block" series. The fallout from the open wheel split in 1979 hurt USAC stock car racing and eventually eliminated USAC from NASCAR's competition. Now championship drivers, because they were competing in CART, could not race USAC stock cars without jumping sanctioning body. The stock division lacked star appeal in that it depended on cross-over drivers such as A. J. Foyt and Johnny Rutherford from its championship division in which to attract a crowd, instead of nurturing heroes like NASCAR did in its Winston Cup Stock division. USAC implemented a failed reorganization program of its stock division in 1981. The sanctioning body disbanded the division by 1984.

[4] "The Indy Racing League's New Formula," *Indy 500 Official Program* 1997, 95-98. In 1996 CART and the IRL used similar engines, components, and chassis. Beginning in 1997, the IRL used their own engine and chassis package. In Europe, Asia, and South America, open-cockpit car competition was the preferred "ladder system" to Formula One-style racing. In comparison with other forms of American racing, Indy car racing has a much smaller minor-league network. Two major minor-league versions of Indy cars, Indy Lights and Formula Atlantics, were smaller and slower versions of championship cars that compete exclusively on pavement. The cost of these cars is quite high in comparison to most forms of American racing.

"rebellion." For sure, it was a most memorable day in the history of American motorsports—never had over half-a million-people witnessed major-league paved open-wheel racing in person at one time. Ironically, (by combining the attendance of both races) the split produced championship racing's biggest one-day spectator turnout. As it turned out for CART, the U. S. 500 was a disaster. On the warm-up lap, almost half of the 27-car starting field crashed behind the pace car![5]

Over time the split frustrated long-time fans and confused potential new fans. With the exception of the Indianapolis 500, the new entity attracted abysmal crowds—a mere 2,000 fans supported one event. Because only a handful of racing teams abandoned CART, the IRL featured few known names. Top CART team owners (Roger Penske, Barry Green, Chip Ganassi, Bobby Rahal, and U. E. Patrick) stayed put, and most of the top open-wheel racing sponsors and fans stuck with CART as well. In its early years, the IRL struggled, but, under George's strong financial commitment, survived its early years.[6]

CART imploded. Plagued by awful management and poor scheduling, the series declined in the late 1990s. The purse and prestige of Indianapolis 500 slowly enticed CART teams and their sponsors to the IRL. The IRL grew robust in the early 2000s as major teams, one-by-one, left the then-struggling CART series. By the 2002, most of the money, sponsorship, television ratings (and American open-wheel fan base) tipped in the IRL's favor. Yet, similar to CART, the number of American drivers in the Indy Racing League declined. Although American drivers dominated the IRL, during the 1990s, Brazilians and Europeans (most of whom brought sponsorship dollars with them) became the new stars. Both CART and IRL owners experienced

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[5] Rob Sneddon, "The U.S. 500," *Open Wheel*, September 1996, 66-75.

[6] Ed Hinton, "Whatever Happened to Indy?" *Sports Illustrated*, 2 June 1997, 26-33; Jonathan Ingram, "Both Sides Winners in War of Wheels," *Street and Smith's Sports Business Journal*, 18-24 May 1998, 32.

more difficulty in securing corporate assistance, and it became integral that drivers seeking a ride first obtain their own sponsorship and bring corporate dollars to car owners. To make matters worse, both entities lost the support of big business, as many American companies funneled their sponsorship dollars to NASCAR.[7]

A group of investors headed by Gerald Forsythe, Kevin Kalkhoven, and Paul Gentilozzi purchased CART's assets in 2003-2004. This modern organization, given the forgettable name the Bridgestone Presents the Champ Car World Series (CCWS) powered by Ford, primarily contested road-course and street-circuit races. By the mid-2000s, George's vision for the IRL looked remarkably similar to CART in the early 1990s. The IRL added temporary street circuits and permanent road courses to the schedule. In 2007 and 2008, none of the top five finishers in the championship were from the United States. The Champ Car World Series, meanwhile, folded after the 2007 season. Most of the former CCWS teams and drivers joined the IRL in 2008.[8]

This story is briefly recounted here because political in-fighting created another power vacuum in American motorsports, which NASCAR filled again. NASCAR had little "drama" and no "identity crisis." Problems in championship racing resulted in the loss of a generation of fans that took to NASCAR. Up-and-coming American open-wheel drivers, instead of shooting for the Indianapolis 500, drifted to stock cars, lured by sponsorship opportunities and NACSAR stardom. Unlike open-wheel racing, NASCAR brought its brand of racing literally nationwide.

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[7] Gordon Kirby, "The Right Man," *Racer*, November 1993, 18; David Phillips, "Alien Nation," *Champ Car*, June/July 2000, 30-35; David Phillips, "Brain Drain," *Racer*, November 2000, 34-40.

[8] Ned Wicker, "So Close So Far Away," 8; Ed Hinton, "Whatever Happened to Indy?" *Sports Illustrated*, 2 June 1997, 26-33; Jonathan Ingram, "Both Sides Winners in War of Wheels," *Street and Smith's Sports Business Journal*, 18-24 May 1998, 32; Ben Blake, "Culture Clash," *Racer*, November 2000 48-53; Wicker, "Twenty Years of CART," *Indy Car & Championship Racing*, January 1999, 22-31, Rick Schaffer, *CART: The First Twenty Years, 1979-1998* (Osceola Wisc.: MBI, 1999), 15-38; J.M. Fenster, "Indy," *American Heritage* 43 (May-June 1992): 66-81; "Leadership Urgently Required," *Champ Car*, December/January 2000, 12; David Phillips, "Best Laid Plans," *Racer*, May 2007, 31.

The IRL became primarily a Midwestern series, sport dominated by foreigners racing ironically before fans of the American heartland.[9]

Unlike the CART and IRL schedules, which greatly varied from year-to-year, NASCAR's schedule remained consistent and the entity further developed long-standing strength in markets. Superspeedways constructed in the 1960s and early 70s—unlike major baseball /football stadiums, such as Cincinnati's Riverfront Stadium (1970), Pittsburgh's Three Rivers Stadium and Philadelphia's Veterans Stadium (1971), relics by the early 2000s—withstood the test of time. NASCAR continued scheduling biannual races on classic superspeedways, such as Talladega, Atlanta, Dover, and Charlotte. Since 1960, NASCAR's top division bumped and banged on short tracks at Martinsville and Richmond, Virginia, and Bristol, Tennessee. In the 1980s, track owners remodeled and upgraded existing speedways with more bleachers, amenities, corporate suites, and media facilities to accommodate the surge in Winston Cup racing. NASCAR grew so popular that from mid-February through mid-November nearly every weekend featured a race. Today, the Daytona 500 earns more television coverage and pre-race "hype" than the Indianapolis 500. NASCAR's marquee also scored significantly higher television ratings over the past decade.[10]

The proliferation of comprehensive cable and network coverage of all NASCAR races enhanced the sport's outreach, and television audiences and crowds expanded In the 1980s and 90s. NASCAR annexed new markets in the Northeast, Midwest, and West and brought the Winston Cup Series to parts of the country once famous for USAC Championship racing.

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[9] Ben Blake, "Dirty Minds," *Racer*, January 2004, 66-69.

[10] Bruce Martin, "NASCAR Speedway Expansion," *Stock Car Racing*, March 1988, 94-104.

Beginning in 1982, a second Winston Cup race at Pocono was added to the schedule. Bi-annual Winston Cup races were within a three-hour drive from New York City, via I-80.[11]

Watkins Glen (New York), the premier American open-wheel and road racing venue during the 1960s and 70s, closed in 1981 due to financial difficulties. "The Glen" returned in 1986, with NASCAR Winston Cup racing. The famed track was back, but the European-style road-course became most famous for its annual August NASCAR Winston Cup race. The track had limited reserved seating but ample space to accommodate tens of thousands of fans who roamed the facility, viewing the action from different vantage points. The atmosphere somewhat resembled Woodstock, which rock-and-rolled about a three-hour drive east of the Glen in 1969. NASCAR acquired another market formerly an open-wheel stronghold. Although Indy (championship) cars returned in 2005, the once-mammoth popularity of open-wheel racing at the famed facility faded to a distant memory. Winston Cup remained the big draw in Formula One's former American home.[12]

Winston Cup racing also webbed toward the other side of the country and cracked another of America's fastest growing markets. In 1988, NASCAR's top division returned to the Arizona desert for the first time since its visit to the half-mile Phoenix dirt track in 1963. Phoenix once had a long-standing, rich tradition of championship racing dating back to 1950, but CART ceased racing at Phoenix in 1995. After the CART/IRL split, the subsequent IRL races at the

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[11] "$8 Million NASCAR Year?" *National Speed Sport News*, 10 December 1981, 3; Mattioli stated, "I had been subsidizing CART with profits from NASCAR races. A CART race cost us twice as much to put on as a NASCAR event and drew half as many people." Bob Myers, "Stock Report," *Circle Track*, June 1994, 18-21; Bruce A. Bennett "Just What the Doctors Ordered," *Speedway Illustrated*, July 2007, 102-105.

[12] "CART Cars to the Glen; USAC Seeks Date," *National Speed Sport News*, 11 July 1979, 3, 32; "N.Y. Times Examines Watkins Glen Issue," *National Speed Sport News*, 22 July 1981, 6, 19; Herb Dodge, "Commentary," *Stock Car Racing*, December 1986, 16.

flat, mile-long facility drew miserable attendance. Top open-wheel racing has not been around since 2004. Meanwhile, a second Cup date was added in 2005.[13]

In the 1990s, NASCAR's "Manifest Destiny" transpired in the Heartland. As a long-held tradition, USAC and Indianapolis Speedway management used the Brickyard once a year—and only once a year—for the Indianapolis 500. However in 1994, Tony George welcomed Bill France Jr. and company to the Brickyard. The race provided NASCAR's second-richest payout for the year and the Brickyard 400 spectacle rivaled that of the Indy 500. Proving that NASCAR's popularity had little to do with competitive and/or side-by-side racing action, this race failed to generate much close and exciting racing due to its "rectangular" configuration and minor embankments. Still, the race draws NASCAR's largest crowd of the season. The success of the Brickyard 400 confirmed the nationalization of NASCAR. During the 1970s, most Grand National tracks remained in Dixie, and the four winningest drivers of the 1970s, Richard Petty (North Carolina), David Pearson and Cale Yarborough (South Carolina), and Bobby Allison (Alabama), were Southerners. New tracks and championship winning non-southern drivers such as Tony Stewart (Indiana), Jimmie Johnson (California), Matt Kenseth (Wisconsin), and Kurt Busch (Nevada), and a massive national fan base had changed the character of America's number-one form of motorsport by the end of the twentieth century.[14]

The construction of new facilities and emergence of a final superspeedway boom greatly contributed to the entity's nationalization. By 2001, Boston, Fort Worth, Miami, Los Angeles, and Las Vegas had new state-of-the-art superspeedways. Heartland superspeedways opened at

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[13] The Sunbelt City staged a Grand Prix race in city streets from 1989-1991. It was a financial failure. However, Arizona has remained a sprint and midget car hub. Those two forms of motorsports still draw extremely well. Just outside of Phoenix, Manzanita Raceway became one of the nation's premier dirt tracks. "Phoenix International Raceway," *Vintage Oval racing,* December 2005, 40.

[14] Clyde Bolton, "From Hialeah to Hueytown," *Stock Car Racing,* November 1969, 30-33. Allison was originally from Miami, Florida, but early in his racing career moved his operations out of Hueytown, Alabama.

Chicago in 2000 and Kansas City the following year—both immediately sold out their Winston Cup races.[15] Similar to the long-running consistency developed in the 1960s at southeastern venues, these newer facilities hosted races that became institutions.[16]

New England represented one of the biggest untapped markets. Built on the property of an existing small speedway, Loudon (New Hampshire) hosted its first Winston Cup race in 1993. The Boston, Providence, and Portland markets now had two major NASCAR events a year. CART featured moderately successful races from 1992 to 1995. The track switched to IRL sanction from 1996 to1998—and ranked among the IRL's most dismally attended events. Meanwhile, the NASCAR schedule stretched along the eastern seaboard from New Hampshire to Florida.[17]

Westernization continued too. Once a year stock cars invade the Nevada desert just outside of Las Vegas. Every June, NASCAR's top division visits California wine country at the beautiful road course at Sears Point (just outside of Monterey). NASCAR's previous success at Ontario and Riverside (which held its last race in 1987), that entity's expansion in the 1990s, and a population base of well over 15 million people dictated the need for a facility in the southern California market. Located just east of Los Angeles (ironically just two miles from Ontario's location), Fontana seats over 200,000 fans. Its wide, two-mile long, D-shaped configuration strongly resembled Michigan International Speedway. Unlike Ontario, built primarily as a

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[15] There were also major speedways built outside of Denver, St. Louis, and Nashville. These tracks do not host Sprint Cup events, but serve for other series and other minor league divisions of NACSAR. Sparta, Kentucky, is a major exception. The track has been in the works for a Cup date for a long time.

[16] Dick Berggren, "Winston Cup is Coming to Town," *Stock Car Racing*, September 1996, 16-33; Tom Jensen, "Racetrack of Dreams? Just Build It. . . ." *Street and Smith's Sport Business Journal*, 18-24 May 1998, 24; Lee Walczak and Stephanie A. Forest, "Speed Sells," *Business Week*, 11 August 1997, 86-90; Roy S. Johnson, "Speed Sells," *Fortune*, 12 April 1999, 58-70. Larry Jewett, "Tracks of Tomorrow," *Stock Car Racing*, August 2000, 24-31.

[17] The International Speedway Corporation (ISC) (NASCAR's Daytona Beach-based sister company) or Speedway Motorsports Incorporated (SMI) owned these tracks. Some consider the NASCAR and ISC a monopoly, a 2008 federal court decision decided otherwise.

championship racing venue, Fontana became predominately a stock car track and featured the big Labor Day weekend race, (previously held at Darlington from 1950 through 2004). CART competed at Fontana from 1997 to 2003 and IRL cars raced at the southern California oval from 2002 to 2005, but since that last event, top open-wheel racing ceased at Fontana.[18]

As big as NASCAR became, grassroots racing persisted despite challenges of rising costs, closing speedways, and Saturday-evening televised Winston Cup events. Would-be fans, instead of heading to their local short track, watched prime-time automobile racing in the comfort of their own homes. Unlike the 1950s, racing no longer sold itself. In an effort to generate fan interest, track owners and operators became more creative and innovative. Evening programs featured shorter schedules and less down time in between heats, thus getting the fans home earlier. Some owners upgraded their restrooms and concession stands. In many cases, promotional events were added; sometimes a little bit of show biz was all that many facilities needed, whether in the form of demolition derbies or figure-8 school bus racing; "gimmicks" brought fans out to the track and supplemented prize money to racers. Nationwide, this was the wave of the future for many of America's small track operators, persisting to this day.

Shopping malls, home movie channels, miniature golf courses, recreation softball, and evening high-school football sapped grassroots track fan bases. Not surprisingly during the 1980s and beyond, suburban sprawl and noise complaints claimed more tracks. The trend continued as interstates brought rural communities within the reach of sprawling cities and suburbs. Bulldozers rumbled where racecar engines once screamed at Flemington (New Jersey)

[18] Sears Point provides the San Francisco, Oakland, San Jose, and Sacramento markets with NASCAR and IRL racing. In 2007, NASCAR added a second Winston Cup date to the speedway. Kay Presto, "'Perfect' Speedway Now Just a Memory," *Grand National Scene*, 1 July 1982, 8-9; Shav Glick, "Greenwood Denies that Riverside will Close," *Los Angeles Times*, 6 June 1985.

Speedway, Ascot (California) Park, and Silver Spring (Pennsylvania) Speedway, famous facilities revered by generations past. Land was more profitable than nostalgia.[19]

Short tracks that survived did so, in part, because communities, regardless of racetrack noise and traffic, embraced the local economic value of the facility. Well-attended dirt tracks at Hagerstown, Maryland; Arlington, Minnesota; and Belleville, Kansas, for example, brought big dollars to small communities throughout summer months. These speedway towns offered limited amenities, which in turn, boosted restaurants and hotels of nearby locales (beyond the race-day noise and traffic). Plus, short tracks (both dirt and paved) put "minor league" communities in the center of the "major league" racing spotlight once or more times a year.[20]

Although paved short tracks existed nationwide, a dirt "re-evolution" also characterized the modern era of American motorsports. Racing on natural surfaces remained truest to its fairground dirt oval roots and to the Midwest. Pennsylvania, Iowa, Ohio, Missouri, Minnesota, and the Dakotas have dozens of dirt tracks, while offering few paved facilities. Geography, natural surface quality, and an undying and persistent demand for half-mile dirt track racing contributed to the success of Williams Grove Speedway (Mechanicsburg, Pennsylvania,) and Knoxville Speedway (Knoxville, Iowa). In 1982, Shav Glick of the *Los Angeles Times* described in aesthetic terms the enduring popularity of dirt racing:

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[19] Shav Glick, "End of an Era: Ascot to Join Southland Tracks that have Passed into History," *Los Angeles Times,* 17 November 1990, 1; "Silver Spring," *Open Wheel,* December 1992, 11-20; Rob Sneddon, "21 Predictions for the 21st Century: The Long View from America's Short Track Operators," *Speedway Illustrated* July 2000, 80-88; Ronnie Allyn, "CRA Grand Prix at Ascot Oval," *Illustrated Speedway News,* 13 October 1959, 9; John Sawyer, "Ascot! The Defender of Tradition," *Open Wheel,* July 1984, 60-62; Dick Berggren, "The Death of Ascot," *Open Wheel,* July 1991, 44-45. Bruce Bennett, "Racing's Answer to Diamond Jim Brady," *Open Wheel,* August 1991, 6; Kyle Hardner, "Stock Cars Won't Race at Flemington Again," *Newark Star-Ledger,* 26 September 2000; Jean Mansur, "Racers Sad to See Track Lose Race With Time," *Newark Star-Ledger,* 1 October 2000; Jeanette Rundquist, "Growth Extends Commuters' Circle of Pain," *Newark Star-Ledger,* 14 March 2004.

[20] Robert Eckhardt, "Quiet Performance," *Stock Car Racing,* April 2000, 62-66; John Gibson, "Ten Top Tracks," *Stock Car Racing,* June 2008, 39-42.

> They run on dirt, as in the days before racetracks were paved. The sight of broadslinging sprint cars under full throttle—their rear ends thrust up in the cushion of dirt along the outside wall, sending clods flying in all directions—is a refreshing sight to old-timers who can't get used to seeing today's aerodynamic machines whizzing around paved ovals as if they were computerized slot cars.[21]

Despite Pocono Raceway's success, Pennsylvania has the nation's most dirt tracks. Built in 1939, Williams Grove Speedway, known as "Ascot of the East," hosted AAA regional sprint car and midget races throughout its early years. The half-miler served as a major World of Outlaws hub, and still puts on regional events every Friday evening throughout the summer, arguably the most competitive weekly schedule in American sprint car racing. Nevertheless, nearby Harrisburg has been slowly suburbanizing and houses have crept closer to the track.[22]

In some places, dirt-track racing is as popular as always. In 1961, an Iowa town of under 10,000 lent its name to the Knoxville Nationals, now the "Super Bowl" of sprint car racing, which raised the dust at the Marion County Fairgrounds. Directly across the street from the track, a residential neighborhood has co-existed with racecars for decades. Some in the local minority complained about noise, but, the town, as a whole, embraced the facility, which remained far from the southeastern reaches of Des Moines sprawl. Weekly summer races were well-attended, and hotels, restaurants, shops, and gas stations in the nearby agricultural communities of Pleasantville and Pella also capitalized on the economic benefits of the racetrack. After a night of racing, competitors and fans typically crammed the otherwise sleepy Dingus Lounge across from the track and shared tales of dirt racing lore.

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[21] Shav Glick, "On Sprint Car Circuit, Dirt is Name of the Game," *Los Angeles Times*, 26 October 1982.

[22] Bruce Ellis, "Paxton's Record," *Open Wheel*, June 1997, 8; Lynn Paxton, interview by author, Knoxville, Iowa, 1 June 2006, in possession of author; John Kozub, "The Ascot of the East, *Speed Age*, November 1950, 1215; Bruce Ellis, "In Defense of the Posse," *Open Wheel*, January 1997, 8.

Natural surfaces for over one hundred years remained a vital component of the aesthetic of racing in the Heartland. When asked about what made Knoxville so special, National Sprint Car Hall of Famer, Ray Lee Goodwin replied:

> Just good earth. . . . This track [Knoxville], we call it a black gumbo you know. This track has more traction at the end of the day than most race tracks have before they even race on it . . . this track would pull your shoes off. After the show, when the fans are coming out of the grandstand, you would see with the flip-flops they will be going back and getting them because they would stick to the ground.[23]

The Nationals occur over a four-day span every August and attract over 30,000 spectators. Of the state's forty-four tracks, pavement captured only two. Despite NASCAR's popularity and the growth of paved track racing, states such as Pennsylvania and Iowa retained racing's agricultural heritage. In places where dirt tracks are "grandfathered "in, such as the state fairground facilities in Missouri, New York, and Iowa, institutional importance outweighed noise, traffic, and real estate value. Local dirt tracks were places where small communities bonded and the people raced across generations.[24]

Temporary urban street circuits came to embody a completely different aesthetic than rural dirt tracks—yet both were among racing's earliest venues. American motorsports competition on public streets dates back to the 1890s. In 1975, race-promoter, Christopher Pook, brought open-wheeled racecars back to American streets, modeling the F-5000 Long Beach (California) Grand Prix after the short-lived Formula One street-circuit in the streets of Montreal, Quebec.[25]

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[23] Ray Lee Goodwin, interview by author, 1 June 2007, Knoxville, Iowa, in possession of author.

[24] Joe Scalzo, "Knoxville," *Circle Track*, August 1984, 54-59; Bryce Miller, "Iowa's Best Kept Secret: Knoxville Nationals," *Des Moines Register*, 17 August 1991; John Phillips, "The Other Knoxville," *Car and Driver*, January 2007, 114-120.

[25] Bob Cutter, "Montreal Streets Proposed for GP," *National Speed Sport News*, 16 February 1977, 6; Bill Oursler, "New Island Home for Canadian GP?" *National Speed Sport News*, 5 April 1978, 3; The inaugural Long Beach

These temporary tracks, organized radically differently from pre-World War I street events with a pastoral character, snaked their way through some of America's most densely populated cities. These new venues were also much safer for competitors and fans. Organizers set up barriers enclosing the entire temporary racetrack, virtually assuring that no one can stray anywhere near the course. If a car flew through the air, violently out of control, towering chain link fences (almost) ensured that twisted wreckage remained out of the grandstands and confined to the racetrack. The new street circuits presented challenges for hosting communities. Road and surface conditions required the extra attention of race organizers and communities before the race. Extensive planning, hard work, and manpower were required to produce these "invisible racetracks." At Long Beach, 8,000 cement blocks, tire barriers, sand-filled barrels, and a 12-foot-high retaining fence separated the racecars from street-side fans. In 1976, Pook brought Formula One to his event, and the globe's fastest, high-tech racing machines invaded the Left Coast from 1976 until 1983 (since 1984, Long Beach has featured some type of open-wheel racing through 2008).[26]

The Long Beach event indicated that the European tradition of street-circuit racing of Monte Carlo and Montreal could work in the United States. Reminiscent of the old Vanderbilt Cups and Grand Prize events of the early 1900s, the annual spring-time event in Long Beach (now sanctioned by the Indy Racing League) was a true spectacle offering the glamour and glitz of a Hollywood gathering. The race itself was secondary. From portable aluminum bleachers,

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Grand Prix featured a minor league version of championship cars (now defunct) division known as F-5000. The Canadian Grand prix relocated to Ile Notre-Dame in 1978 and remained until 2007.

[26] From 1976-1980, there were two American races on the Formula One World Championship schedule. CART raced at the event from 1984 through 2003, CCWS from 2004 through 2007. Shav Glick, "Long Beach Congratulates Itself," *Los Angeles Times,* 30 September 1975; Ronnie Allyn, "Mario Waits—and Wins Street GP in Long Beach," *National Speed Sport News,* 6 April 1977, 6, 19; Ronnie Allyn and Bill Oursler, "Reutemann's Ferrari Cops Long Beach GP," *National Speed Sport News,* 5 April 1978, 3; Gordon Kirby, "Proof of Concept," *Racer,* April 1997, 68-71; Christopher Pook, "Grand Prix Racing Proof of Benefits? Ask Long Beach," *Los Angeles Times,* 30 March 1986; Maurice Hamilton, "Globe Theater," *Racer,* September 2000, 30-43.

spectators saw the cars zip by only for a mere few seconds, but the atmosphere drew fans back to the city.[27]

In the years ahead, other cities (Las Vegas, Houston, Phoenix, and Denver) followed the Long Beach example and temporary street circuits became common in American auto racing. Strong coordination between racing entities, promoters, and municipal governments resulted in the most successful events. Temporary street circuits bolstered local economies, while showcasing metropolitan areas on the national and global racing stage. In some cities, these events proved to be an economically viable use of public space. Constructed near neighborhoods, street circuits, like early midget racing, brought motorsports to the people and generated new fans.

Temporary circuits confronted drivers with a unique set of challenges because the condition and characteristics of pavement varied by sections of the course. In addition, because engineers, mechanics, and drivers could not test during the off-season on public streets, they learned technical track data in a mere three- to four-day stretch.[28]

Beginning in 1985, St. Petersburg, Florida, developed a long-standing annual street-circuit event. America's city of green benches and northern retirees was in the midst of a major demographic shift. In 2000, St. Petersburg had nearly 250,000 residents, and its median age declined from 48.1 in 1970, to 39.3 by 2000. Starting in 2005, the Indy cars took over the city's

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[27] The race was also known as the United States Grand Prix West. "Grand Prix Dates Ok," *Illustrated Speedway News,* 22 November 1978, 6; "LBGP's Street Circuit Now Sport's Standard," *National Speed Sport News,* 4 April 1979, 23; "Long Beach Grand Prix April 6-7-8," *Illustrated Speedway News,* 15 November 1978, 8.

[28] One of the important benefits of road courses and street circuits is that sports car entities and CART shared venues and raced on the same weekends. Bill King, "Mr. Pragmatic," *Racer,* August 1997, 105.

streets the first weekend every April—just after Major League Baseball's Tampa Bay Devil Rays concluded spring training.[29]

Solid promotion and a good relationship between the IRL and municipal government led to the 2008 signing of a long-term contract between the IRL, Andretti-Green Promotions, and the City of St. Petersburg. The city picked-up part of the tab by repairing and preparing the street surfaces and providing police and emergency personnel.[30] One most recent version of the course was 1.8-miles long and enclosed by over eight miles of fencing. Racing tires, stacked 30- to 36-feet high, neutralized energy in the event of a crash, and protected drivers from more serious impact. City employees welded down manhole covers and repaired surface bumps and depressions with fiberized steel concrete, the same material used on airport runways, in preparation for the spring race.[31]

The city has since become the second-most successful American locale for street-circuit racing. According to the St Petersburg/Clearwater Area Convention and Visitors Bureau, the race extended the winter tourist season and in 2005 generated over 5 million dollars. One year, Gene Simmons of the rock-band Kiss attended the event. Air shows and rock concerts

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[29] In the 1980s the New York Mets and St. Louis Cardinals trained at St. Petersburg. The Devil Rays started play in the mid 1990s. The event was known as the St Petersburg Grand Prix from 1985-1990, and the Florida Grand Prix of St Petersburg from 1996-97. In 2003 CART staged a race at St Pete. There was no event in 2004. Tom Scherberger, "Race is On to Alter City's Age-Old Image," *Orlando Sentinel*, 20 October 1985.

[30] This was the first non-oval IRL event. Sixty-five thousand tickets were sold in 2005. Depending on the stipulations of the contract some cities receive portions of the ticket sales. Janel Stephens, "Streets Becoming Race-Ready," *St Petersburg Times*,15 January 2003; Tom Zucco, "Going Full Throttle," *St Petersburg Times*, 23 February 2003; Tony Fabrizio, "A Watershed Car Race," 4 April 2005; Carrie Weimar, "The Grand Prix of St Petersburg—Countdown to Green," *St Petersburg Times*, 29 March 2006; Brant James, "IRL Race Agrees to Remain Here Through 2013," *St Petersburg Times*, 7 April 2008.

[31] Carrie Johnson and Brant James, "City Likely to See Grand Prix Race," *St. Petersburg Times*, 3 September 2004. Dana Oppenheim, "Building the Course," *St Petersburg Times*, 30 March 2007.

comprised part of the race weekend's activities. Reasonable general admission prices (20 to 25 dollars) made St. Petersburg's race a family-friendly affair.[32]

The latest layout of the course combined downtown streets with the Albert Whitted Airport, a general-aviation facility. The circuit had natural and artificial aesthetic appeal; from the grandstands spectators could view the city's skyline, look out over Tampa Bay, watch small-engine airplanes take off, and check out the countless yachts floating along a temporary dock constructed along the track. Fans departed and reentered the event at their leisure to wander and walk the streets of downtown St. Petersburg to shop, dine, drink, or visit the Salvador Dali museum. This was an exciting "invisible racetrack" with fast straightaways, ample passing opportunities, and many ideal spectator vantage points. Some racegoers watch from atop downtown condominium towers.

But not all was racing fun in the Sunshine City. Barricades and blockades surround the temporary track and police presence increased over the years. The race brought downtown traffic jams, unusual any other time of the year. Angry letters began filling the editorial pages of the *St. Petersburg Times.* One resident complained, "for three days of noise and mess the Beautiful Bayfront area near downtown is loused up for about two months—the Bayfront parks are fenced off like concentration camps and the streets are blocked off with high cement and wires like a federal penitentiary."[33] Some St. Petersburg residents flee the noisy racecars and race-day traffic, heading elsewhere for the weekend.[34]

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[32] "Looking Back: St. Petersburg's Racing History, *St Petersburg Times,* 1 April 2005; Carrie Weimar, "Who Won the Race? The City, Mayor Says," *St Petersburg Times,* 3 April 2006; Carrie Weimar, "For Some, Race is a Grand Pain," *St Petersburg Times,* 12 March 2006.

[33] "Grand Prix is Less Than Grand for Some, Readers Series: Letters," *St. Petersburg Times,* 9 November 1989.

[34] "Grand Prix Organizers Sign Three-Year Pact with SCCA Series," *St. Petersburg Times,* 9 May 1990; Weimar, "For Some, Race is a Grand Pain."

Sprawl, noise, and fuel connections with auto racing had well been established by the time racing arrived in St. Petersburg, but environmental criticism directed at motorsports escalated as a new set of ecological issues, namely wetlands preservation and habitat protection of endangered species emerged. In the mid-1990s, environmentalists opposed the construction of Homestead-Miami speedway—the first major racing facility built in the face of significant ecological resistance. Throughout racing history, geography was vital to the success and long-term survival of a speedway. A location far from population centers and neighborhoods, yet easily accessible by automobile was most ideal. The Homestead track presented a quirk in this long-standing relationship. In the view of many track opponents, the facility was *too isolated.*[35]

In the 1980s, South Florida's population explosion and large South American immigrant community created a favorable market for street-circuit racing (open-wheel and road racing are extremely popular in Brazil, for example). South Florida developer Ralph Sanchez, who emigrated from Cuba at the age of six, was the driving force responsible for bringing top-level auto racing to Miami. In conjunction with Sanchez's promotion company, Miami Motorsports Inc., the city hosted road races on city streets nearly every year from 1983 through 1995. Once a year, Miami became Long Beach of the East, as exotic sports cars and movie stars invaded the city. The races took place during February, April, and November and ranked among the best attended street-circuit events in the United States. No particular surprise, the most successful events tended to take place in February at the height of tourist season.[36]

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[35] Gordon Kirby, "Movers," *Racer,* June 1993, 18.

[36] Usually IMSA or CART raced at the Miami street events. Gary Long, "Major Races Appear Headed for Miami," *Miami Herald,* 7 July 1983; Bob Rubin, "Weather's Gloomy, but Sanchez Isn't," *Miami Herald,* 12 November 1987; Gary Long, "Miami's Car Put on a Spirited Show," *Miami Herald,* 24 February 1989; Gary Long, "Miami Prix Shifting to April Move Gets Race on Network TV," *Miami Herald,* 26 June 1990; Gary Long, "Homestead Racing Site Takes Shape, *Miami Herald,* 7 November 1992; Bob Knotts, "Big Dreamer Ralph Sanchez Built a World-Class Track Near Miami," *Sports Illustrated,* 28 October 1996; Darrel Fry, "South Florida Embracing Racing as IndyCar Hits Streets of Miami, *St. Petersburg Times,* 26 February 1995; Gordon Kirby, "Proof of Concept,"

The street-circuit race, jeopardized by the city's plans to expand the area around the Port of Miami, along Biscayne Boulevard and Bicentennial Park near I-395 in the early 1990s, forced Sanchez to seek an alternate location for his annual event. Realizing the bleak long-term prospects for a street race (municipal insurance and construction/deconstruction costs also mounted), Sanchez pursued building a permanent road course facility in north Miami on the site of Munisport, an EPA-designated superfund site scheduled to close in late 1992 (at one time considered among the most toxic landfill sites in the country). Sanchez reportedly offered the city one to two million dollars for development rights (the city would own the facility and collect at least $200,000 annual shares of the profit). Residents, strongly opposed to the threats of racecar noise and race-day traffic, loudly cried NIMBY (not in my backyard). Seeking a path offering easier resistance, Sanchez scrapped the plan, and set his sights on developing a racing facility in a less populated but more environmentally sensitive region farther south. NASCAR's superspeedway boom emerged at about the same time. Hoping to draw stock cars (and NASCAR) to south Florida, Sanchez revised his plan and embarked on developing a multi-purpose facility (including an oval).[37]

The land was five miles west of Biscayne Bay at the southern edge of Homestead in southernmost Miami-Dade County, the last major mainland settlement before the Florida Keys. Once a small agricultural outpost, Homestead developed into a small city connected to the north by Miami sprawl communities, Cutler and Kendall. Tourist dollars benefited the region;

Racer, April 1997; Bill King, "Caribbean Connection," *Racer*, December 1999, 100. The November races (sanctioned by CART) took place from 1985-1988, did not draw as well as the February events.

[37] Harold Mass, "Grand Prix Exit Leaves Mixed Reviews," *Miami Herald*, 18 October 1992; Carl Hiaasen, "Track Developer Now Charity Case for Homestead," *Miami Herald*, 1 August 1993; Gary Long, "Race Changes its Look," *Miami Herald*, 12 January 1994.

Homestead bordered Biscayne National Park to its west and Everglades National Park to its east. NASCAR, however, also stimulates tourism.[38]

An environmental occurrence, a once-in-a-lifetime storm, set the stage for the first major auto racing facility in south Florida since the Fulford-Miami board track (which hosted one race before the Hurricane of 1926 reduced it to rubble). In 1992, category-four Hurricane Andrew nearly wiped out the Miami area. Massive destruction to Homestead Air Force Base alone accounted for 8,000 lost jobs. The base, once a major installation for warplanes, opened in 1942. After Andrew leveled the installation, it reopened as an Air Force Reserve base two years later in 1994.[39] Ninety percent of Homestead's homes were either damaged or had disappeared, and $540 million in crop losses devastated the agricultural sector. Most affected crops included tree fruits, such as avocadoes, limes, and mangoes. Homestead's population dipped from 30,000 to 16,000.[40]

Sanchez and track boosters argued that by moving the Miami Grand Prix to Homestead, jobs and dollars would stimulate the struggling post-Hurricane Andrew local economy. This economic argument was essential in securing political support, and after the track's completion, Sanchez admitted, "definitely, the hurricane helped us." He also had help from local officials, despite hurdles presented to him in the era of environmental-impact statements. Internal documents revealed that some environmental and engineering permits were expedited.[41] For

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[38] Curtis Morgan, "'Miracle' Park Saved the Beauty of Biscayne Bay," *Miami Herald*, 18 October 2008.

[39] Jacob Bernstein, "The Feds Want to Know: Is a Proposed Airport too Close to Turkey Point?," *Miami New-Times*, 4 June 1998; "Court Blocks New Miami Airport at Old Air Base," *Washington Post*, 19 December 1998; Katurah Mackay, "Airport Imperils Florida's Parks," *National Parks*, January/February 1998, 13-14.

[40] By 1995, Homestead's population recovered to 25,000. Mike Clary, "Homestead Fights Hurricane Andrew," *Los Angeles Times*, 8 June 1995; Greg Cote, "For Sanchez: A Dream, a Homestead," *Miami Herald*, 2 March 1995; "New Track Revitalizes Community – the Complex Provides a Rainbow for the Hurricane-ravaged town," *Orlando Sentinel*, 3 November 1995.

[41] Joseph Siano, "Speedway Helps Aid a Town's Recovery," *New York Times*, 5 November 1995.

example, a municipal report stated that "this project is part of Homestead's efforts to repair the economic damage wrought by Hurricane Andrew . . . [through] the use of sports as an economic development tool."[42] One engineer wrote that "because this facility is a critical element of the post-hurricane economic recovery effort in Homestead, it is urgent that the environmental permits be issued as expeditiously as possible."[43]

Homestead city officials welcomed Sanchez with open arms. Local political forces led by Homestead city manger, Alex Muxo, created a coalition that generated $20 million of public funding from the Homestead Metro Commission. The Florida Sports Development Hotel Room Tax, a recently state-enacted revenue that launched a boom in spring-training complexes around the peninsula, kicked in an additional 11 million.[44] Miami-based engineering firm Bermello, Ajamil, and Partners designed plans for the track, and groundbreaking commenced on August 24, 1993—one year after Hurricane Andrew. [45]

Environmentalists and track opponents temporarily halted the heavy machinery two weeks after groundbreaking. The incident smacked of other environmental battles of the era when construction began before opposition had an opportunity to mobilize. For example, in 1968, in the first stage of a massive jetport project, the Miami-Dade Port Authority constructed a six-mile runway in the Big Cypress under the public radar. Once politicians, residents, and media got

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[42] Edward A. Swakon letter to Col. John Hall 16 September 1993, Department of Environmental Management (DERM), Miami, Florida.

[43] Edward A. Swakon letter to Janet Llewellyn 16 September 1993, Department of Environmental Management (DERM), Miami, Florida.

[44] Dick Kelley, "Homestead Welcomes Winston Cup," *Stock Car Racing*, November 1999, 32-37. "Homestead Racing Toward Recovery," *Sun-Sentinel*, 9 November 1995.

[45] Dexter Filkins and Fran Brennan, "On the Fast Track to Recovery; Homestead May Get Auto Race," *Miami Herald*, 16 October 1992; Todd Hartman, "Roaring Out of Town: Grand Prix Unlikely to Burn Rubber in Miami after '94," *Miami Herald*, 21 February 1993; "Hurricane-Ravaged Homestead Rejuvenated by Track, " *Tampa Tribune*, 2 November 1995; Mike Clary, "Homestead Fights Hurricane Andrew," *Los Angeles Times*, 8 June 1995.

wind of the jetport project, an able, grassroots opposition mounted a successful counteroffensive. In Homestead, environmentalists pointed out that speedway construction began without necessary environmental permitting from government agencies including the U.S. Fish and Wildlife Service, Miami-Dade Department of Environmental Resources (DERM), and the South Florida Water Management District.[46]

Caught off guard, Sanchez and track proponents assumed they had already obtained necessary permitting for the project. As then-Homestead Mayor Tad Demilly stated, "there wasn't any reason to check. We had been building houses and stadiums out there since 1974 with no problem." Indeed, DERM and South Florida Water Management District documents—circa the 1970s and 80s—support DeMilly's contentions. However, the permits (which encompassed 3,200 acres) allowed residential, not commercial or industrial construction. Nowhere within the extensively modified permitting history was there a motorsports complex provision for 343 of those 3,200 acres. The delay forced Sanchez to cancel the debut race, originally slated for November 1994.[47]

The first major enviro-motorsports battleground was set—ecology, groundwater, wetlands, endangered species, bureaucracies, and a passionate local environmental community were all in the mix. The powerful environmental movement in south Florida had worked hard for so long to protect the region against powerful corporate and political interests. One major south Florida environmental group, the Tropical Audubon Society, was the most visible opponent of the track

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[46] Todd Hartman, "Funds Okd for Speedway Plan," *Miami Herald,* 7 February 1993; Siano, "Speedway Helps Aid a Town's Recovery."

[47] Lisa Arthur, "EPA, Wildlife Service Postpone Grand Prix Dreams," *Miami Herald,* 24 March 1994, 3. The original permit (75-11-69) was dated in 1972. According to South Florida Water Management documents, the first modification (75-11-70) was dated 3 December 1975. It was modified in 1979, 1981, 1984, 1985, and 1987. South Florida Water Management District Modification of Surface Water Management Permit # 13-00044-5, 14 February 1985.

proposal. Formed in 1947—the same year a small parcel of the original Everglades was established as a National Park and Marjory Stoneman Douglas' Everglades manifesto, *The Everglades: River of Grass* was published—this entity helped protect Biscayne Bay from industrial development in the 1960s, culminating with the establishment of Biscayne National Monument in 1968. The group played an essential role in Nixon Administration's halting of the massive Everglades jetport project in 1969-70 and participated in the effort leading to the designation of the Big Cypress National Preserve (northwest of Everglades National Park) in 1974.[48] Earlier members of Tropical Audubon's front lines, such as Alice Wainright, Charles Lee, and Joe Browder, were among Florida's most energetic protectors of the Sunshine State's fragile ecosystem. Tropical Audubon Society president Dennis Olle represented the next generation.[49]

As Olle pointed out, "'buffer land' is crucial for habitat protection," and track opponents hoped to protect a semi-wild, "buffer" region—where less disturbed, or "better" environmental areas existed immediately to the south and east of the track.[50] Wildlife defenders argued that the speedway would create inevitable habitat disruption of endangered species, such as the Florida panther, Cape Sable seaside sparrow, and Eastern indigo snake. Moreover, opponents expressed concern about possible groundwater contamination. Finally, environmentalists argued that wetlands occupied part of the track site. Building on wetlands necessitated an Army Corp of

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[48] Most of Biscayne National Park exists underwater. Gordon Harvey, "We Must Free Ourselves . . . From the Tattered Feathers of the Booster Mentality: Big Cypress Swamp and the Politics of Environmental Protection in 1970s Florida," in *Paradise Lost? An Environmental History of Florida* Jack E. Davis and Raymond Arsenault, ed. (Gainesville: University Press of Florida, 2005), 350-374.

[49] Marjory Stoneman Douglas, *The Everglades: River of Grass*, (New York: Rinehart Books, 1947). "Conservation—Jets vs. Everglades," *Time*, 22 August 1969, 42-43. "Jetport and the Everglades—Life or Runway?" *Living Wilderness* (Spring 1969): 13-20; "Everglades Jetport Ban Reported Near Approval," *New York Times*, 31 December 1969; Cyril T. Zaneski "Audubon Group Born in '47,"*Miami Herald*, 26 October 1997.

[50] Olle, telephone interview by author.

Engineers dredge-and-fill permit and a plan for wetlands mitigation. Sanchez and the city had neither. [51]

American racing entered a more critically addressed relationship with wetlands, a most sensitive geological and geographical occurrence. Once described as "to thin to walk on, yet to thick to drink," wetlands perform valuable, essential functions within an ecosystem. Nowhere was this more evident than in south Florida. Wetlands helped charge the Biscayne Aquifer, an essential groundwater link between the south Florida mainland and Biscayne Bay, and the major source of drinking water for Miami-Dade County. Wetlands provide natural flood control and purify ecosystems, particularly in south Florida where incidences of salt-water intrusion were common—not to mention the proliferation of pesticides and fertilizers used for decades to support the state's agricultural sector and St. Augustine-covered residential lawns. As historian Ann Vileisis aptly puts it, "clearing, draining, and development have compromised these services, resulting in the 'need' for costly dams, levees, and water treatment plants."[52] South Florida, and its elaborate network of human-made canals, lakes, streams, and ponds, told the tale best.

Wetlands destruction went hand-and-hand with the post-World War II boom in American suburbanization. Scientists estimated that 53 percent of America's disappeared at the expense of reclamation. Florida drained and filled 49 percent of its wetlands, much of it a result of the

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[51] Olle, interview by author; Mark Yanno, telephone interview by author, 6 February 2009, in possession of author. "Status of Cape Sable Seaside Sparrow," *Tropical Audubon Bulletin,* March/April 2007, 1, 3.

"First Environmental Permit for Racetrack Clears Hurdle," *Miami Herald*, 16 January 1994; Jeff Snook, "Work on Track Might Resume Soon," *Palm Beach Post,* 24 February 1994.

[52] Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington D. C.: Island Press, 1997), 4.

massive draining and ditching of the Everglades, ultimately reduced to 52 percent of its original 6,200-square-mile expanse.[53]

After decades of Everglades destruction, the tide in the 1980s slowly shifted to restoration. People wanted to save what remained of the Everglades, and the federal and state government took notice. The groundbreaking Comprehensive Everglades Restoration Plan in 2000 was one of the last major acts of the Clinton administration and enacted to stymie additional development of South Florida's ecosystems with the federal assistance of 7.8 billion dollars. The construction of a motorsports facility—albeit on "poor" wetlands—went against the materializing restoration trend.[54]

An important element factored into the enviro-motorsports equation, Section 404 of the 1972 Clean Water Act. In the briefest of terms, Section 404 (A) of the Clean Water Act provides the EPA jurisdiction for setting national environmental policy in regards to water. Section 404 (B) designates the Army Corp of Engineers as the entity "responsible for enforcing EPA wetlands policies and issuing permits for the dredging and filling of wetlands," and gives the EPA veto power over an Army Corp permit. [55] However, the latter rarely occurred. According to the *Miami Herald*, out of thousands of permits applied for in eight southeastern states, only on six occasions did the EPA exercise a veto during the 1980s.[56]

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[53] For example, David McCally, *The Everglades: An Environmental History* (Gainesville: University Press of Florida, 2000); Davis, *an Everglades Providence;* Grunwald, *The Swamp: The Everglades, Florida, and the Politics of Paradise* (New York: Simon & Schuster, 2006); Jeffrey P. Cohn, "Restoring the Everglades, *Bioscience,* 44 (October 1994): 579-583.

[54] Craig Pittman and Bill Adair, "Graham Lands in the Middle on Airport Issue," *St. Petersburg Times,* 14 January 2001; Mark Silva and Curtis Morgan, "Air Force's Rejection of Proposed Florida Airport Looks Firm," *Miami Herald,* 18 January 2001; Curtis Morgan, "Airport Plan Scaled down," *Miami Herald,* 10 June 2001. "This Idea Isn't Flying," *Palm Beach Post,* 28 April 2000. Cyril T. Zaneski, "Plans for Airport at Former Homestead, Fla., Air Force Base Grounded," *Miami Herald,* 8 January 2000.

[55] "Protecting the Environment," *Miami Herald,* 12 September 1989.

[56] *Ibid*.

Superspeedway construction required a dredge-and-fill permit from the Corps.[57] According to the State of Florida Department of Environmental Protection, "dredging means excavation in wetlands or other surface waters or excavation in uplands that creates wetlands or other surface waters. Filling means deposition of any material (such as sand, dock pilings, or seawalls) in wetlands or other surface waters."[58] Few places on earth have been carved, ditched, and drained more than south Florida.

Despite Section 404's federal protection for wetlands, it was George H. W. Bush's mandated "no net loss" of wetlands in 1989 that clearly identified the federal government's stance on wetlands depletion. According to Vileisis, Bush's proclamation "marked a clear landmark in the country's thinking about wetlands. With no other landscape type had we counted our remaining stock and decided it should be saved up."[59] Essentially, this provision stated that where wetlands were eliminated, wetlands must be replaced. For the green flag to wave at Homestead-Miami speedway, wetlands needed to be replaced—or in Homestead's case—improved. Five years before Bush's proclamation, Florida's Warren S. Henderson Wetlands Protection Act of 1984 had its own unique loophole regarding "no net loss." *St Petersburg Times* eco-journalists Craig Pittman and Matthew Waite put it bluntly, "it was okay to wipe out a wetland as long as you made up for the damage somehow."[60]

South Florida Water Management District studies determined that, in fact, part of the Homestead speedway property would claim land considered wetlands. According to a District

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[57] State of Florida regulations require Department of Environmental protection (DEP) and/or Water Management District approval.

[58] "Environmental Resource Permitting Program, Dredge and Fill Fact Sheet," 19 January 2007; available from http://www.dep.state.fl.us/water/wetlands/erp/dffact.htm; Internet; cited 3 March 2009.

[59] Vileisis, *Discovering the Unknown Landscape*, 318-319.

[60] Pittman and Waite, *Paving Paradise*, 84.

Report, the speedway site was located on "a mix of abandoned farmlands, active and abandoned tree nurseries, and several wetland areas." Designating the property as "disturbed lands," the agency's studies, however, claimed that endangered or threatened species were not found on site.[61]

The "trade-off" was 174.27 acres of "marginal to fair quality exotic-infested wetlands" (racetrack site) in exchange for the improvement of a 160-acre parcel located offsite (just south of the track) also dominated by invasive species, such as Brazilian Pepper and cattails. Introduced to Florida from South America sometime in the early- to mid-1800s, Brazilian pepper's ornamental appearance and bright red berries, similar to the holly bush, made the tree a popular Christmastime replacement in Florida (where the holly does not grow). Brazilian pepper can cause itching and/or allergies to humans and its poisonous berries, if mistakenly consumed by horses, cattle, and birds, can be deadly. The plant can be eradicated by herbicides or manual removal, but has proved to be a worthy survivor—the plant grows easily and rapidly in wet, sub-tropical Florida.[62]

Cattails, the other major invasive culprit in the 160-acre mitigation area, "are the most visible symbol of the Everglades' demise, crowding out saw grass and the native wetland wildlife that goes with it." [63] This species, fueled by phosphorus runoff from farms and ranches, had spread rapidly throughout the Everglades after World War II. Cattails can grow over 12 feet high.

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[61] South Florida Water Management District, Surface Water Management Staff Review Summary (Draft).

[62] 168 acres were considered "upland acreage," the missing 1.70 acres, roadways. South Florida Water Management District Surface Water Management Staff Review Summary (Draft); Amy Ferriter, ed. "Brazilian Pepper Management Plan for Florida: Recommendations from the Brazilian Pepper Task Force Florida Exotic Pest Plant Council," July 1997; available from http://www.fleppc.org/Manage_Plans/schinus.pdf; Internet; cited 3 March 2009.

[63] "Reduced Runoff from Farms, Yards Slows Spread of Cattails in Everglades," *Sun Sentinel*, 26 August 2003.

According to South Florida Water Management District documents, the "plan of attack" for 112 acres was manual removal of all vegetation with "bulldozers, rakes, and front-end loaders."[64] The small amount of indigenous vegetation would remain (but tagged and monitored). The remaining 58 acres underwent "selective clearing." Individual trees and shrubs, predominately Brazilian pepper, would be sprayed with herbicides at the base of the plants.

Despite Section 404 and Bush's "no net loss" goal, the United States still lost 58, 000 acres of "original" wetlands annually in the 1990s. [65] The south Florida motorsports mitigation was miniscule, an attempt to restore 160 acres, serving as a buffer to "higher-quality" wetlands. Environmentalists argue, however, that mitigation in this case, much like so many others in Florida, amounted to a net loss of 160 acres of natural wetlands.[66]

In addition to the mitigation and dredge-and-fill issues, Miami-Dade County Department of Environmental Resources Management (DERM) and South Florida Water Management District studies indicated the track would have minimal impact on endangered species. The District also determined that the track site did not pose a threat to the Biscayne Aquifer and exist in a critical wellfield zone.[67] But Sanchez obtained approval—including the essential dredge-and-fill permit from the Army Corp of Engineers—from other agencies and construction resumed in the spring of 1994, after an eight-month delay.

In addition to mitigation, the city Homestead gave up development rights for additional 320 acres, putting them under a conservation easement, meaning the land was ineligible for

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[64] South Florida Water Management District Surface Water Management Staff Review Summary (Draft).

[65] Paul Scoderi and Leonard Shabman, "Rethinking Compensatory Mitigation Strategy," *National wetlands Newsletter* 23 no. 1 (2001): 5-6, 12-13.

[66] Choking the Glades," *St Petersburg Times*, 1 December 2002.

[67] South Florida Water Management District Report, 15 April 1994.

agricultural, residential, commercial development or hunting. Recreational use of the land, such as hiking was permitted. [68] This acreage represented a minor victory for those seeking to protect a small piece of Florida. Granted, these were minor ecological "concessions," still better than countless compensatory mitigation cases in Florida, where "created" wetlands were often no more than a water hazard in the middle of a golf course.[69]

In sum, economics (and recreation) trumped ecology. Olle maintained that the environmental community knew the track was a fait accompli and activists had to do the best they could with the cards dealt, "fight the good fight," and prepare to wage a different battle on a different day.[70] As it turned out, environmentalists won a much bigger battle in the region, and proved victorious after the January 2001 nixing of the proposed Homestead Jetport on the property of the Homestead Air Force Base (also on the edge of Everglades and Biscayne National Parks).[71] Similar to the jetport battle of the late 1960s, environmental groups, concerned citizens, and a bipartisan political effort prevailed. But unlike the superspeedway six

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[68] Lisa Arthur, "Nature Group Walks Fine Line in Negotiations Over Racetrack," *Miami Herald* (neighbors suppl.) 9 January 1994; Todd Hartman, "First Environmental Permit for Racetrack Clears Hurdle," *Miami Herald* (neighbors suppl.), 16 January 1994; Todd Hartman, "Wetlands Concern Halts Racetrack," *Miami Herald*, 3 September 1993; Lisa Arthur, "Rough Road Ahead for Homestead Racetrack," *Miami Herald*, 20 July 1994; Oscar Musibay, The Long Road to Homestead," *Miami Herald*, 2 November 1995; Lisa Arthur, "Road Finally Clears For Motorsports Construction," *Miami Herald*, 12 May 1994.

[69] Ronald Peekstok, interview by author, 6 March 2009, West Palm Beach, Florida, in possession of the author; Vileisis, *Discovering the Unknown Landscape;* Pittman and Waite, *Paving Paradise.*

[70] Joseph Tanfani, Todd Hartman, and Dexter Filkins, "Racetrack Deal Could Hurt Bid to Keep Heat," *Miami Herald*, 29 July 1993; Todd Hartman, "City's Future on Track," *Miami Herald* 2 August 1993; Lyda Longa, "Homestead Bets on Auto Racing to Set It on the Road from Ruin," *Wall Street Journal*, 5 April 1995.

[71] Dana Casady, "U. S. Bars Airport Near the Everglades," *New York Times*, 17 January 2001; Bill Maxwell, "Homestead was a Sweet Win but Just the Beginning," *St. Petersburg Times*, 21 January 2001; Grunwald, *The Swamp.*

years earlier, time was on the side of environmentalists. The proposed Homestead jetport directly contradicted the Everglades Restoration Plan, instituted in 2000.[72]

The 1.5-mile speedway opened in 1995 and gave a southernmost home to CART, IRL, and minor-league NASCAR racing. But, In part because he was unable to secure a Winston Cup race, Sanchez sold the Homestead-Miami Speedway outright to the International Speedway Corporation and Roger Penske in 1997. Once the track was out of Sanchez's hands and fully under ISC control, NASCAR granted Homestead a Winston Cup race. The first event took place in 1999. Homestead became the center of a media blitz every November, entertaining the last NASCAR race of the season when the entity crowns its new champion.[73]

While entering the facility, a racegoer can observe two large plaques on display, one of which lists Homestead and Miami-Dade County officials who participated in the effort to construct the facility. Inscribed on the other plaque is recognition that the Homestead-Miami Speedway was a major economic revitalizing force for Homestead in the aftermath of Hurricane Andrew. As *Miami Herald* columnist Oscar Musibay reflected, "the jewel of South Dade's post-Hurricane Andrew Crown is a multicolored $59 million auto racing facility built on land once use to produce potatoes."[74] Without question, hotel operators who jack-up regular rates

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[72] Evan Perez, "Air Force Set to Approve Plan for Base," *Wall Street Journal*, 31 March 1999; Curtis Morgan, "Miami-Area Officials' Plans for Air Force May be Disrupted, *Miami Herald*, 6 January 2001; Rafer Guzman, Land Purchases to Preserve Everglades Lack Coordination, GAO Report Says," *Wall Street Journal*, 12 April 2000; Lizette Alvarez, "Senate Approves $7.8 Billion Plan to Aid Everglades," *New York Times*, 26 September 2000.

[73] Lisa Arthur, "City Drafting Bond sale for Track," *Miami Herald*, 8 December 1994; Gary Long, "Two Area Races in '95 Draw Huge Response," *Miami Herald*, 1 October 1994; "New Track Revitalizes Community—the Complex Provides a Rainbow for the Hurricane-Ravaged Town," *Orlando Sentinel*, 3 November 1995.

[74] Oscar Musibay, "The Long Road to Homestead," *Miami Herald*, 2 November 1995. The track was not only an ecological liability for Homestead, but it also presented a larger than anticipated economic burden for Homestead taxpayers. The track wound up costing more during construction. An additional 18 million in revenue bonds for "promised amenities and equipment" that Sanchez and DeMilly said were necessary to win track approval from racing's sanctioning bodies.

two- to three-times higher on race weekends generate big money. To be sure, local restaurants and gas stations generate more customers and on Florida's Turnpike more tolls.

As an unnamed reporter observed, "the behemoth asphalt track has risen from the rubble, offering promises of economic salvation."[75] Another reporter opined, "the Homestead Track is no aesthetic wonder. It sprung from farmland and scrub trees. The Turkey Point power plant is a neighbor. Surely this scene cannot match the spectacular panorama of street-course racing in downtown Miami against a backdrop of cruise ships on the bay."[76] No doubt, the 75,000-seat Homestead-Miami Speedway offered a quite unique aesthetic. From the grandstands, one can see what remains of the lower east Everglades extending endlessly to the horizon as cars zoom along the backstretch of the facility at over 200 miles-per-hour.[77]

The Homestead example showed that environmentalists, despite falling short of their original goal, were exercising a larger voice in questioning the recreational racing of automobiles, and the south Florida battle formed an important turning point in the greening of American motorsports. Since the mid-1990s, conflicts over wetland and open-space preservation, and the protection of endangered species, all stemming from the competitive use of automobiles, moved up on the environmental agenda. The Homestead showdown also illustrated the growing connection between science and racing—ecological studies and Audubon-sponsored bird-citing reports preempted the first wave of the green flag. As the following chapter will show, the ecological concerns at Homestead were not a one-time affair.

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[75] "New Track Revitalizes Community – the Complex Provides a Rainbow for the Hurricane-ravaged Town," *Orlando Sentinel*, 3 November 1995.

[76] Greg Cote, "A Victory for Homestead," *Miami Herald*, 5 November 1995.

[77] The event retains Miami in its title because the city has worldwide visibility. There was also a 2.2-mile road course within the facility for automobile and motorcycle road racing.

As the modern era progressed beyond the turbulent 1970s, environmental and ecological factors shifted and stifled the development of American auto racing. Direct connections ensued in the 1970s and continued into the new millennium. This twenty-five year stretch constituted as a bridge to the greener era in American motorsports. Auto racing caught environmental attention, and kept the sport's growth in more ecological check.

CHAPTER 9
ENVIRO-MOTORSPORTS & THE GREENER ERA

> Staten Island is a bedroom borough where residents don't just follow the so called NIMBY rule of "Not in My Back Yard." They take it a step further to BANANA: Build Absolutely Nothing Anywhere Near Anyone.
>
> —*Bob Pockrass*[1]

> If Kazakhstan can eliminate lead from gasoline, why can't NASCAR?
>
> —*Frank O'Donnell*[2]

> If you worry about ethanol in your vehicle, you don't need to look any further than the quarter-million-dollar engines running around an Indy car series track.
>
> —*Tony Simpson*[3]

By the turn of the twenty-first century, motorsports was under a more watchful set of environmental eyes. As auto racing slowly developed an environmental consciousness, motorsports' critics became more aggressive and voiced concerns over the sport's effect on wetlands, wildlife, and nature. Regionalism persisted as well; one part of the country remained motorsports-free, while another region reconnected with auto racing's deep agricultural roots.

In that motorsports-free region, the nation's largest city became a battleground for one of the biggest enviro-motorsports clashes. For decades, promoters and representatives from all of America's major sanctioning bodies sought to contest auto races in the New York City metropolitan area. The closest New York City came to big-time racing since the pair of Long Island-hosted AAA-sanctioned Vanderbilt Cups in the late 1930s came in the form of eight CART races held at the Meadowlands (New Jersey) Sports Complex parking lot from 1984

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[1] Bob Pockrass, "An Impossible Dream?" *NASCAR Scene*, 12 August 2004, 80.

[2] Letter from Frank O'Donnell to Brian France, in Viv Bernstein, "Dangerous Exposure," *NASCAR Scene*, 19 January 2006, 30-31.

[3] Tony Simpson of Michigan Ethanol, *2006 Ethanol Press Kit*.

through 1991.[4] Despite NASCAR's national boom, the Big Apple eluded big-time motorsports, and the International Speedway Corporation (ISC) viewed tapping into the New York City market as a final frontier.[5]

In 2004, to the tune of 100 million dollars, the ISC purchased a 676-acre parcel of land near the Goethals Bridge on the northwestern edge of Staten Island. This section of the island was well known as home to the former Fresh Kills Landfill. Opened in 1948, Fresh Kills grew into the largest trash dump in America before closing in early 2001.6 The ISC's new property most recently served as home to 82 oil storage tanks and had a long history of industrial use, but this section of Staten Island also contained a mixture of salt and freshwater wetlands. Some of the largest tracts of New York City's surviving marshland remained in the city's least urbanized borough and, in a similar vein as extreme-eastern New Jersey, untouched by dredging operations. At the same time, the proximity of Staten Island's wetlands to Manhattan made them perhaps the world's most valuable, potential real estate. According to ISC senior vice president Lee Combs, his concern's property constituted the largest undeveloped parcel of land within each of the five boroughs.[7]

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[4] Steve Potter, Jersey is Eager for Indy Race," *New York Times*, 8 January 1984; Michael Katz, "Andretti Winner in Prix," *New York Times*, 2 July 1984; Joseph Siano, "New York Grand Prix? Decision in 90 Days," *New York Times*, 28 July 1991; Ned Wicker, "Twenty Years of CART," *Indy Car & Championship Racing*, January 1999, 22-31; Iver Peterson, "Racing in the Shadow of the City," *New York Times*, 18 December 1999.

[5] The Meadowlands are about ten miles west of Manhattan. The Indy Racing League also competes at ISC tracks. Steve Waid, "NASCAR's Venture into New York Well Worth the Huge Cost," *NASCAR Scene*, 5 August 2005, 8; Bob Pockrass, "Unresolved Issues," *NASCAR Scene*, 29 April 2004, 14; Mathew Futterman, "International Speedway Hoping for a Victory Lap," *Newark Star-Ledger*, 25 February 2005. As of 2008, the ISC operated thirteen tracks.

[6] The site was temporarily re-opened to accommodate debris from the 9/11 terrorist attacks. Kirk Johnson, "Dumping Ends at Fresh Kills, Symbol of Throw-Away Era," *New York Times*, 18 March 2001; Robert Sullivan, "Wall-E Park," *New York Times Magazine*, 23 November 2008.

[7] Robert Sullivan, *The Meadowlands: Wilderness Adventures at the Edge of a City* (New York: Anchor Books, 1998); Michael Brick, "NASCAR's Possible Track Site is Far, Far From Home," *New York Times*, 29 May 2004; Bob Pockrass, "ISC Buys Land for New York City Track," *NASCAR Scene*, 6 January 2005, 16; Bob Pockrass, "Down Payment," *NASCAR Scene*, 29 July 2004, 22; Walter Elliott, "Land Sale Paves Way for ISC's New Track,"

As in the Homestead-Miami case, the local political machine pushed for the construction of a proposed speedway. In 2004, Staten Island president, James P. Molinaro, approved construction of a $550- to 600-million speedway on the former industrial site, and the ISC hired former Staten Island president Guy V. Molinari's Republican lobbying firm, the Molinari Group, to develop plans for a NASCAR track. Seating about 80,000 fans, the asphalt speedway would be three-quarter-miles-long, making it the first NASCAR short track built since 1961.[8]

Unlike Homestead, political opposition was strong. Falling across partisan lines, local officials disagreed with the notion that a racetrack reflected an ideal use of the property. Leading the city's political battle against the ISC were Republican city councilmen James Oddo and Andrew Lanza, and Democratic councilman Michael McMahon. McMahon, the last of the three councilmen to come out and publicly oppose the project, stated, "we know that coming to Staten Island would be a great benefit to NASCAR and ISC. It's still not clear what the benefit would be for Staten Island."[9] Staten Island residents that echoed McMahon's stance and opposed the speedway mobilized into a grassroots entity known as Staten Island Citizens Against the Track (SCAT) to generate local awareness and activism against the track proposal.

Although the least inhabited of the city's five boroughs, Staten Island's population expanded from 191,555 in 1950 to 443,728 in 2000.[10] One third of its working population commuted to Manhattan, another third had New Jersey jobs, and the remainder stayed in Staten

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National Speed Sport News, 12 January 2005, 2; Matthew Futterman, "Gentleman Don't Start your Engines Yet," *Star Ledger*, 8 December 1999. (GATX was responsible for the clean-up before groundbreaking.) "Staten Island: Contract to Build a Speedway," *New York Times*, 24 July 2004.

[8] Charles V. Bagli and Eric Dash, "Companies Face Major Obstacles in Plan to Bring NASCAR to S. I.," *New York Times*, 18 July 2004; Eric Dash, "Former S. I. President Will Aid Speedway Company," *New York Times*, 4 June 2004; Bob Pockrass, "Playing Politics," *NASCAR Scene*, 12 August 2004, 82; Maureen Seaberg and Don Singleton, "Molinari Racing to Save NASCAR," *New York Daily News*, 29 April 2006.

[9] Pockrass, "What Went Wrong with ISC's Staten Island Bid?"

[10] Joseph Berger, "New York City's Last Frontier is Staten Island," *New York Times*, 4 February 2005.

Island. New York City was America's largest metropolitan area but fifth-largest NASCAR television market. Nevertheless, according to one reporter, Scarborough and Nielsen research studies indicated that that there were 3.5 million NASCAR fans in the New York City metropolitan area and nearly 70,000 on Staten Island. On race day, in other words, Staten Island was bound to be overwhelmed by race fans. One study projected that up to 60 percent of the fans would originate from the New York City Metropolitan area.[11]

In other sports, such as football or baseball, a likely outcome can become evident halfway through a game. Spectators gradually exit before its conclusion, thereby dispersing outgoing traffic. Motorsports events, where crowds of well over 100,000 spectators are common, were different. Races keep crowds in their seats until the very end, because although a dominant driver could lead every lap, his or her racecar might puncture a tire, run out of fuel, blow an engine, or crash on the last lap. With massive crowds exiting the track at the same time, motorsports events generate some of the worst traffic scenarios of any sport.

Unlike nearly all major post-World War II speedways, the Staten Island track would be built adjacent to a congested urban environment. For a borough that had 257,000 registered vehicles and a reputation for congested streets, race-day traffic was the major area of contention for Staten Island residents. Their concerns were legitimate; the borough was not accessible by subway, and only four bridges—Verrazano-Narrows, Outerbridge Crossing, Bayonne, and Goethals—connected the island. A narrow, obsolete two-lane connection linked Staten Island to the New Jersey port city of Elizabeth, the track would rest just south of the Goethals Bridge.[12]

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[11] Eric Dash, "NASCAR's Worry in New York? Lots of Cars Going too Slowly," *New York Times,* 19 March 2005; Mike Mulhern, "Bumper to Bumper," *Winston-Salem Journal,* 1 July 2005.

[12] The Verrazano-Narrows Bridge connects Staten Island with Brooklyn. The Outerbridge Crossing and Bayonne Bridge connect the island with Perth Amboy and Bayonne, New Jersey, respectively. Bob Pockrass, "ISC Begins Community Review Portion of Staten Island Plan," *NASCAR Scene,* 20 April 2006, 24; Bob Pockrass, "An Impossible Dream?" *NASCAR Scene,* 12 August 2004, 80-82.

Without question, Staten Island's outdated infrastructure was ill-equipped to accommodate its post-World War II growth and, as one journalist observed:

> the island's relatively primitive road system—mostly paved-over paths set down centuries ago by American Indians, then used by farmers and early settlers. The meandering layout makes even the simplest traffic control measures, like timed stoplights, virtually impossible.[13]

The ISC pledged to limit track use to three major events per year (two NASCAR Sprint Cup races and, most likely, an Indy Racing League date).[14] Nevertheless, opponents argued that Staten Island's transportation infrastructure simply could not endure the mass entrance and exodus of over 80,000 spectators, even if their migration occurred on only a few designated weekends year. In response, the ISC developed plans for a fleet of ferries to transport thousands of race goers who would assemble in New Jersey and commute to the racetrack. The ISC also consulted engineering firms about building a light-rail system. Early track plans designated approximately only 8,000 parking spaces, in the hope that mass transit would alleviate automobile traffic on race day.[15]

Some people in Staten Island liked these proposals, and a grassroots entity known as Staten Island NASCAR Hopefuls (SINCH) formed to counter the mobilized opposition.[16] The group was partially comprised of passionate race fans motivated for the appeal of professional motorsports in their city, but many SINCH members saw the track as an economic and

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[13] "When North Meets NASCAR," *New York Times*, 11 December 2005.

[14] Steve Waid, "NASCAR's Venture Into New York Well Worth the Huge Cost," *NASCAR Scene*, 5 August 2005, 8; Bob Pockrass, "ISC Pledges to Limit Use of New York Track," *NASCAR Scene*, 5 May 2005, 22.

[15] Robert Strauss, "Engines of Economic Progress, *New York Times* (New Jersey edition), 1 August 2004; Maureen Seaberg and Frank Lombardi, "S.I. Polls Wave Red Flag at NASCAR Proposal," *New York Daily News*, 11 May 2006; Yoav Gonen, "Islanders do Slow Burn over Speedway," *Staten Island Advance*, 2 March, 2005; Sierra Club, *Race to Protect Staten Island: Why the Giant Racetrack Stadium Project is Bad for Staten Island Residents and Harmful to Wildlife*, 27 April 2006; available from http://www.sierraclub.org/field/northeast/RacetoProtectStatenIsland.pdf; Internet; cited 27 November 2006.

[16] Bob Pockrass, "The Waiting Game," *NASCAR Scene*, 1 December 2005, 12.

infrastructural boon to Staten Island. Supporters argued in favor of track construction jobs and potential employment stimulated through road and bridge improvements that the new facility would likely generate. SINCH also countered that ferry ports and light-rail system could improve existing traffic woes in the borough, and stressed that the track may, in fact, alleviate the borough's highway and bridge deficiencies. In their view, the infrastructure improvements proposed to accommodate three weekends of racing would impel far-reaching, year-round positive effects.

This battle within the borough heated up over time, and in April 2006, factions came to blows during ISC's (and NASCAR's)[17] first public hearing regarding the proposal. Opponents and proponents—including labor representatives, politicians, environmentalists, and concerned residents—filled the 918-seat Michael J. Petrides Educational Complex auditorium to capacity, and the overflow, denied entrance to the meeting, assembled outside the building. The meeting began at 6:30 P.M. but was cut short by police 45 minutes later after councilman Lanza was confronted on-stage and put in a headlock by union treasurer Christopher Wallace, of the New York District of Carpenters Local No. 20. Wallace, a Staten Island resident, took exception after councilman suggested that most of the union jobs would likely originate outside of Staten Island, and that those who commuted to the island and constructed the property would not be forced to deal with the likely traffic issues in Staten Island that would come with the completed project. The national media picked up this story, which subsequently generated negative fallout for SINCH, track supporters, and the ISC.[18]

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[17] As long-time motorsports correspondent Steve Waid has wittily mentioned, the independent corporations of NASCAR and ISC are so closely linked that one may be substituted for the other in a sentence, as I do here.

[18] Charles V. Bagli and Eric Dash, "Staten Island, Start Your Engines: NASCAR May Be on Its Way," *New York Times*, 28 May 2004; Sewell Chan, "Plan to Race Stock Cars Frays Tempers at S.I. Meeting," *New York Times*, 1 May 2006; Bob Pockrass, "Meeting on Proposed NY Track Becomes 'Near Riot'" *NASCAR Scene*, 4 May 2005, 22; Bob Pockrass, "Despite Controversy, ISC Forging Ahead with Staten Island Plan," *NASCAR Scene*, 11 May 2006,

Municipal and political conflicts comprised a portion of this story's place in enviro-motorsports history, but ecological contingencies form its true legacy. The environmental community was strongly opposed to the track and its potential detrimental ecological impact. Many had seen a restorative opportunity when the city closed the nearby landfill and aimed to protect the property, especially the salt- and freshwater wetlands occupying the site. Although the area was zoned for industry, environmentalists viewed the construction of a massive speedway as a worse-case scenario. On the flip side, ISC representatives claimed that the property amounted to a wasteland, useless for anything but major development. As city council speaker Christine Quinn stated in a letter to New York City Mayor Michael Bloomberg: "NASCAR proponents have painted a picture of doom and gloom by asserting, 'if not the track, then you will get an industrial wasteland.'"[19] Environmentalists and scientists certainly did not buy into this rhetoric, but neither did a growing number of residents. As more people saw that the property's economic and environmental potential was not limited to industry, sanitation, or motorsports, the track opposition gained momentum.

Ecological concerns launched the Sierra Club and smaller, local organizations, such as WildMetro, into action. The Sierra Club, one of America's largest and most influential environmental organizations, formed in 1892 three years before the first organized American auto race, but this was apparently the first time that the group clashed with American motorsports at the macro-level. Sierra Club New York City field office executive director Suzanne Mattei researched and published a mammoth Sierra Club-sponsored report on potential

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23; Selena Roberts, NASCAR Wants its Roar to Join the Jackhammers," *New York Times*, 19 November 2006; Walter Elliott, "Tempers Flare at Staten Island Meeting," *National Speed Sport News*, 3 May 2006, 3, 18; Suzanne Mattei, telephone interview by author, 8 February 2009, in possession of author; David Burg, telephone interview by author, 6 March 2009, in possession of author. Burg is CEO of Wild Metro.

[19] Bob Pockrass, "War of Words Swirls Around NYC Track Proposal," *NASCAR Scene*, 18 May 2006, 26.

environmental hazards posed by the proposed speedway. A Yale-educated attorney by original profession, Mattei assumed the lead position in 2003, and her meticulous examination of the property provided necessary scientific ammunition in debunking the claim that a speedway was the ideal use of the property.

Mattei used ecology, history, and geography as effective battle tools. Her research methodology was strongly rooted in environmental statements, interviews with long-time naturalists and bird watchers, and other scientific and demographic-based sources. Throughout the extensively footnoted report, Mattei stressed the ecological and hydrological sensitivity of the track site. Situated near Arthur Kill, a ten-mile-long and narrow tidal strait dividing New York and New Jersey and connecting Newark and Raritan Bays, the property sat only a few feet above sea level. The report stressed that Staten Island side of the Arthur Kill "presents mostly a natural shoreline that provides unique and highly valuable habitat in the midst of an otherwise highly urbanized area" including "four ecologically significant salt marshes," and bordered by the 162-acre freshwater gulfport marsh.[20]

According to preliminary plans (and before any permit applications), the ISC planned to fill existing wetlands with four million cubic yards of silt to raise the property elevation three to six feet in an extensive dredge-and-fill project. In return, the ISC investigated the possibility of improving some of the existing freshwater marsh. Mattei, aided by the wetlands expertise of biologist Michelle Ashkin, argued that compensatory mitigation required for the project, which either created new wetlands, restored old wetlands, or improved degraded wetlands, was a poor environmental compromise to the massive speedplex, which was expected to eliminate fifteen acres of existing wetlands. Mattei stated that Section 404 of the Clean Water Act, the mitigation

[20] According the report, Gulfport is now the second-largest freshwater emergent marsh in New York City. Sierra Club, *Race to Protect Staten Island.*

provision, "should not be viewed as a blanket permit to destroy" and stressed that mitigation works better in some cases and not in others.[21]

The Homestead case provided a solid example of wetlands mitigation with mixed results (and supported Mattei's claim). Nearly 15 years since restorative efforts ensued, the South Florida Water Management District and other state agencies fell short of mitigation objectives and continued in their attempt to meet the ecological goals set forth in the mid-1990s for the 160 acres of restored wetlands near the Homestead-Miami Speedway. Mitigation was by no means a magic wand.[22]

Quite the contrary, it often interrupted or destroyed and could interrupt or destroy a pre-existing ecosystem that had "valuable functions." For instance, buffer land at the edges of wetlands was also critical because some creatures become more easily accessible for predators than if nests were further out. Finally, because wetlands protect areas during major storms due to their sponge-like characteristics, filling and altering existing wetlands could have catastrophic consequences in hurricane-prone areas such as Staten Island. In essence, Mattei's concerns over wetlands mitigation as a means to facilitate development echoed the sentiments of others in the scientific community. In short, many environmentalists and scientists believed, and studies showed, contriving wetlands with a bulldozer and an engineer's blueprint was no real substitute for nature's organic handiwork.

Mattei called the existing "little wetlands that could" on Staten Island a Clean Water Act success story. Once sewage reduction and water quality improvement measures were enforced in the mid-to-late 1970s, herons, egrets, and ibises returned after disappearing from the area as a

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[21] Vileisis, *Discovering the Unknown Landscape*; Pittman and Waite, *Paving Paradise.*

[22] Peekstok, interview by author.

result of long-term habitat depletion and contamination.[23] However, just as the ecosystem was recovering from centuries of environmental degradation, the area faced a new environmental calamity when this part of the Staten Island coast was devastated by Exxon's 567,000-gallon pipeline oil spill in 1990.[24] Literally overnight, area residents became environmentalists and participated in an extensive clean-up and restorative effort by replanting over a quarter of a million acres of smooth cordgrass (*spartina alterniflora*), which provides nutrients to marshes, serves as food and habitat sources for wildlife, purifies water, and protects areas from storms by securing tidal soils. [25] As of a result of these eco-restorative efforts, species returned and the cordgrass thrived. Many locals were not prepared to allow the ISC to negate their dedication toward restoration. As Mattei stated, "there were a lot of people that cared a lot about this particular area. It was important to people. . . . They wiped [oil] off rocks and picked up birds." It was her strong contention that the ISC not only underestimated the sensitivity of the landscape but also the environmental passion of New Yorkers.[26]

Without question, building a racetrack in such an area had countless ecological consequences. The study also pointed out that ferry-generated wake and waves could disrupt mussels, crabs, and fish, and Mattei indicated that one of the reasons the track was a worse-case scenario rested in the fact that wildlife becomes accustomed to "consistent" noise, such as the drone of passing automobiles and the continuous roar of jet engines from nearby Newark Liberty

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[23] "Dan Ackman, "Birds Flock to These New York Islands," *Wall Street Journal*, 13 July 2006.

[24] The *Exxon Valdez* spill was on March 24, 1989.

[25] This species of cordgrass is common along the eastern seaboard. Sierra Club, *Race to Protect Staten Island.*

[26] Mattei, telephone interview by author; Allan R. Gold, "To Colony of Herons, Foul Marsh is Home," *New York Times*, 29 August 1991; Katharine C. Parsons, "Recovering from Oil Spills, The Role of Proactive Science in Mitigating Adverse Affects," *Colonial Waterbirds*, 19: 1 (1996), 149-153; Alan D. MacCarone and John N. Brzorad, "The Use of Foraging Habitats by Wading Birds Seven Years after the Occurrence of Major Oil Spills," *Colonial Waterbirds* 21 no. 3 (1998): 367-374.

Airport. Short-term racecar, spectator, and helicopter noise occurring a few weekends a year, however, would be more detrimental to birds and other animals residing in an already fragile ecosystem. The triad of race weekends actually could not have been more ecologically offensive. They were scheduled to coincide with bird-breeding season, with the most damaging noise originating from helicopters. It was possible that a multi-pad heliport would support up to 30 trips on race day.[27]

ISC and its designer team appeared committed to keeping the parking lots unpaved to enhance groundwater recharge. Although this initially appeared to be more environmentally friendly, upon further examination, a grass parking area may not have been very "green" after all. Automotive leaks, petroleum-based or otherwise, and careless tailgating fans depositing non-environmentally friendly substances remained a problem on non-paved lots. Plus, in the event of a heavy rain, the unpaved lots could create muddy traffic nightmares. The report debunked claims that unpaved lots remedied the loss of nesting land by pointing out that if parking lot grass were mowed too short, birds would not nest; if grass were kept long, cut only for races, birds would mistake the lots as safe nesting areas—destroyed just in time for the next race weekend. The report also cited countless local bird experts who pointed to an avian richness in the area, concluding that birds of all varieties would be adversely affected by such fortress amidst the coastal wetlands.[28]

The Sierra Club report was pivotal in convincing many fence sitters as well as proponents that the track was an environmental nightmare (one could speculate that the Homestead outcome may have been different had a similar report been compiled). Environmentalists proved that the

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[27] Mattei, telephone interview by author.

[28] Sierra Club, *Race to Protect Staten Island.*

ISC had not done a fair ecological analysis in its attempt to bring racing to an urban area rich with nature and lacking in infrastructure. In addition to overlooking potential wildlife and wetland issues, ISC officials failed to note how bad existing traffic was on Staten Island and to what degree citizens would oppose the threat of more. The ISC, having pumped millions of dollars into the land purchase and in bankrolling scientists, lobbyists, and engineers to back the proposal, finally cut its losses and officially abandoned the effort to build the track in December 2006.[29]

Because the speedway battle unfolded in America's largest city, it raised both public and national awareness of the tight connection between automobile racing and nature. The speedway defeat in Staten Island presented environmental and social hurdles that the ISC and NASCAR had not addressed on such a large scale in the past, and, up until then, the entities faced little mobilized opposition. As was the case of some other major environmental victories, such as the Everglades and Homestead jetport battles touched on earlier, unlikely bi-partisan alliances had formed in Staten Island. A grassroots-based coalition of politicians, environmentalists, biologists, birdwatchers, residents, and an Ivy League-educated lawyer turned scientist blockaded the growth of American motorsports in the shadow of Manhattan. Track opponents and environmentalists held the upper hand in this "supreme" battle over space and place to race. Rarely was a track demolished to create open space, but in crowded Staten Island open-space issues stymied the construction of a major track, and the only NASCAR event that continued to take place in New York City was the season-ending awards banquet at Manhattan's world-famous Waldorf-Astoria Hotel.[30]

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[29] Alan Feuer, "Plan for NASCAR Speedway is Scrapped on Staten Island," *New York Times*, 5 December 2006.

[30] As of 2009, some of the wetlands still require additional clean-up, and the fate of the "racetrack" land remains pending. The ISC has expressed strong interest in constructing a track near Seattle. However, the suburban

Times were indeed changing for NASCAR, and the entity was subjected to increasing political, social, and environmental pressure.[31] NASCAR continued to wave the motorsports exemption from the 1970 Clean Air Act, and tetraethyl lead remained in its 110-octane racing gasoline (in comparison, street-car octane levels rarely exceed 94) through the 2006 season. Since the early 1950s, long-time racing-fuel supplier Unocal adapted and produced different fuel formulas to adjust to NASCAR's changing compression ratios and engine specifications. As early as 1988, the petroleum company was prepared to supply NASCAR teams with an unleaded blend of high-performance gasoline.[32] Although countless high-performance sports cars and open-wheel racecars (and domestic vehicles) had run without the additive for decades, NASCAR refused to get the lead out. Lead was clearly not essential to NASCAR's success, yet mechanics and engine builders testified that lead provided critical lubrication essential for NASCAR's high-performance, high-compression engines. This stance brought back similarities to the 1920s controversy. Although countless viable unleaded options were available for racecars over the years, pleas within the motorsports and "racing" petroleum industries and lack of a government ban kept the poisonous substance legal on American racetracks.[33]

Washington counties of Snohomish, Olympia, and Kitsap offered little encouraging response to the ISC's proposals. As a result, the ISC hoped to develop a track near Portland, Oregon, in its effort to tap into the Northwest. That effort has also failed.

[31] By the end of the 20th century, tobacco sponsorship was no longer critical to NASCAR's survival, success, and expansion. R.J. Reynolds ceased sponsoring NASCAR after the conclusion of the 2003 season. The Series was renamed Nextel Cup from 2004-2007. Sprint purchased the Nextel name and the series is currently known as the Sprint Cup.

[32] In 2003, Sunoco assumed the title as NASCAR's fuel provider. Tim Wusz, telephone interview by author, 6 February, 2009, in possession of author.

[33] Venlo Wolfsohn, "Clean Air Buffs Turn to Racing," *Washington Post*, 29 March 1973; Art Bently, "Race Gas: What it was, what it is and what it's Liable to be," *Stock Car Racing*, February 1988, 77-79; Bill Luther, "Leaded Fuel Ban No Problem for Unocal," *Knoxville News-Sentinel*, 7 February 1993; Doug Gore, "Selecting Racing Gas," *Stock Car Racing*, September 1988, 22-3; Harry Stoffer, "Leaded Race Fuel Leaves Black Mark on Industry," *Automotive News*, 14 February 2005, 14; Rea White, "The Perfect Blend," *NASCAR Winston Cup Scene*, 20 February 2003, 40-41.

Historically, there was a great lack of medical and scientific literature regarding the effects of lead on motorsports participants and spectators. However, in the twenty-first century, the scientific community took notice of NASCAR's leaded gasoline. A 2005 Indiana University study showed a rise in blood-lead levels and noted several health symptoms among NASCAR crew members, but cautiously concluded that those levels were not to the point of "requiring formal action by federal health agencies."[34] Researchers concluded that more studies needed to be done at a much larger level, meaning more teams, more participants, and more spectators needed to be tested in a comprehensive longitudinal project.

Despite this groundbreaking, long-overdue, and somewhat ambiguous study, it was protracted public pressure from environmentalists, the media, Internet bloggers, and advocacy groups, such as Clean Air Watch, that eventually convinced NASCAR to make the change to cleaner fuel.[35] Frank O'Donnell, president of Clean Air Watch, was one of the most vocal opponents of lead in racing fuel and quite blunt in one interview when he said that "breathing in lead will actually harm your brain. It will reduce your IQ level. One way of putting it, breathing in too much lead will make you stupider."[36] This type of criticism led NASCAR to take responsible action, and adopted unleaded fuel beginning with the season-opening Daytona 500 in 2007.[37] NASCAR was the last major hold out. The Clean Air Act exemption for motorsports

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[34] O'Neil, Steele, McNair, Matusiak, and Madlem, "Blood Lead Levels in NASCAR Nextel Cup Teams," 70.

[35] Rea White, "NASCAR Might Get the Lead Out," *NASCAR Scene*, 3 June 2004, 16; Mike Hembree, "Environmental Group Urges Switch to Unleaded, *NASCAR Scene*, 17 March 2005, 20.

[36] Living on Earth, *NASCAR's Lead Foot*, 6 May 2005, available from http://www.loe.org/shows/segments.htm?programID=05-P13-00018&segmentID=8; transcript, Internet; cited 11 October 2006.

[37] Sunoco still produces lead racing fuels. Rea White, "NASCAR to Switch to Unleaded Fuel in 2008," *NASCAR Scene*, 26 January 2006, 16. Rea White, "NASCAR's Move to Unleaded Gas Earns Competitors Praise," *NASCAR Scene*, 2 February 2006, 16; Viv Bernstein, "NASCAR Plans to Switch to Unleaded Fuel in '08," *New York Times*, 20 January 2006; Rea White, "NASCAR to Switch to Unleaded Fuel in 2008," *NASCAR Scene*, 26 January 2006, 16; "NASCAR Hugs a Tree," *Sporting News*, 10 February 2006, 53; Jesse Greenspan, "NASCAR Gets on Track,"

endured, and leaded racing gasoline remained in a minor capacity. (After a lengthy period of extensions, it appears Canada will outlaw leaded racing fuel effective in 2010, but no such ban is on the books in the United States.)[38]

At about the same time NASCAR eliminated old technology, the Indy Racing League mandated the use of ethanol fuel. Although ethanol had been used as a power source for some of the earliest automobiles, the transition, in part, reflected the Indy Racing League's association with the Midwest and longstanding objective of tapping into "cutting-edge" technology and innovation to bring fans out to the track. In addition, through its partnership with the IRL, the ethanol industry's marketing strategy aimed to push America away from its dependence on fossil fuels and promote ethanol as a clean-burning, biodegradable, renewable, and domestically produced fuel source.[39]

As discussed earlier, alcohol fuels re-emerged as alternative primary-fuel sources in the American automobile industry in the late 1970s.[40] But once gasoline prices stabilized in the 1980s and 90s, the alcohol fuel movement, as was the case after World War II, again lost momentum. Because of its higher-octane, and cleaner-burning properties, however, alcohol remained as an additive. Ethanol-enriched gasoline remained predominantly in the corn-producing Midwest, and methanol-enriched fuel was common in California. The ethanol and

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Audubon, May-June 2006, 12-13; Brant James, "Nextel Cup about to Run a Bit Cleaner," *St. Petersburg Times*, 17 February 2007.

[38] Apparently, lead is still common in drag racing. Forbes Aird, "Fuel for Thought," *Stock Car Racing*, March 1995, 141-146; Doug Gore, "Race Gas Versus Pump Gas," *Speedway Illustrated*, October 2007, 70-72; Tim Naumetz, "Race Cars get 2-Year Reprieve on Canada's Leaded – Fuel-ban Tories Issue Exemption Despite Health Warnings," *Toronto Star*, 4 May 2008.

[39] Phil McCombs, "Cars May Guzzle Alcohol too," *Washington Post*, 19 June 1977; Wilfred Kohl, ed., *Methanol as an Alternative Fuel Choice: An Assessment* (Washington, D.C.: Johns Hopkins, 1990); J. P. Vettraino, "Racing Green," *Autoweek*, 23 April 2007, 59-60.

[40] Bernton, Kovarik, Sklar, *The Forbidden Fuel.*

methanol industries vied for the lion's share of the American alcohol fuel market in the 1980s and 90s, but by 2000, ethanol rose to the top. The ethanol industry had a stronger infrastructure in place, and more effectively garnered agricultural and political support, which brought it generous government subsidies and tax breaks. Promoted by Heartland senators, including Jim Thune (R) South Dakota and Evan Bayh (D) Indiana, the ethanol lobby was powerful within the Beltway (although still weak in comparison with the oil industry).[41]

Since the days of famous ethanol proponent Henry Ford, most of the alcohol fuel in this country remained corn-based. As of 2008, domestic ethanol was available predominately in two blends, E-10 and E-85. Once confined mostly to the Heartland, E-10 (known as gasohol in the 1970s and 80s) became widespread at commercial gas stations. Beginning in 1997, the auto industry started producing flex-fuel vehicles that could operate on either E-85 or gasoline (reminiscent of the Model T). The production of flex-fuel vehicles, and number of dealers selling E-85 (also more centralized in the Midwest) increased after the 2005 federal passage of the Renewable Fuel Standard, which initially required 4 billion gallons of biofuels in the nation's fuel supply by 2006 and 7.5 billion gallons by 2012. The most notable everyday example of the Renewable Fuel Standard can be found across America on the labels of gasoline pumps, which often read: "may contain up to ten percent ethanol" or "this product contains ten percent ethanol."[42]

In 2005, most open-wheel entities still used methanol; stock car and sports car groups used gasoline. Although the ethanol industry had expressed an interest in getting involved with

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[41] Allan R. Gold, "Methanol Defended as Option," *New York Times*, 20 September 1989, B-6.

[42] E 85 has an octane rating of 105. Joe Browder, interview by author, 21 December 2008, Washington, D.C., in possession of author; Bob Kravitz, "IRL Leads Energy Revolution with its Switch to Ethanol," *Indianapolis Star*, 18 May 2007; Alex Walordy, "Last Call for Alcohol," *Stock Car Racing*, August 1995, 58-69; "Green America: Waking up and Catching Up," *Economist*, 27 January 2007, 60. The RFS has been modified over the years.

motorsports for some time, Paul Dana was the man primarily responsible for convincing the IRL to make the switch to ethanol.[43] Dana, a former *Autoweek* correspondent, had a passion for racing and for the environment, obtained sponsorship from the ethanol industry, and embarked on a professional racing career while promoting the corn-based fuel. Despite his lack of long-time racing experience, ethanol-industry funding allowed him to climb quickly to the highest level of American open-wheel racing. Dana and the ethanol industry successfully pitched the fuel and convinced the IRL mandate ethanol power beginning with the season-opening race at Homestead in 2007.[44] Their timing was appropriate. The IRL, although clearly prevailing over the weakened Champ Car World Series (formerly CART), still suffered from the American open-wheel racing split. The IRL sought a marketing shot-in-the-arm and was eager to gain sponsorship dollars from the ethanol industry. On a larger scale, gasoline prices were on the rise, Americans sought relief at the pump, farmers demanded higher grain prices, and the Renewable Fuel Standard was passed that year. Just as was the case in the 1930s and again in the 1970s, Americans sought domestic solutions for foreign oil dependence, and ethanol was one place they looked.[45]

The IRL and the ethanol industry also stressed that the fuel was safer at the racetrack. Unlike toxic methanol, ethanol spills were less hazardous and its tail-pipe-exhaust non-poisonous. Because ethanol provided improved fuel economy, and higher octane (113) than methanol (107), the switch made engineering sense, requiring only minor technical changes to

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[43] Tragically, Dana was killed in a practice crash at Homestead in March 2006. Bruce Martin, 'Paul Dana Loved Racing, and it Cost Him His Life, *National Speed Sport News*, 29 March 2006, 23.

[44] In 2006, the teams used ninety percent methanol with ten percent ethanol blended in.

[45] Tom Slunecka, interview by author, 1 April 2007, St Petersburg, Florida, in possession of author; EPIC (Ethanol Promotion and Information Council) Press Kit. Les MacTaggart interview by author, June 2007, Newton, Iowa, in possession of author.

the IRL's engine and rules package. Drivers commented that the fuel and slightly modified engines provided greater performance than methanol especially when accelerating out of a turn. In addition, cars handled better because the smaller fuel tanks resulted in less fuel capacity—thus lighter and quicker cars.[46]

The link between the Indy Racing League and the ethanol industry was an example of modern-day chemurgy. Technological and economical benefits of an agriculturally derived power source were showcased through cutting-edge automobile racing engines. The ethanol industry embarked on a major campaign to promote the fuel through the IRL. For example, at the St Petersburg street race in 2007 an airplane flew overhead throughout the weekend extending the banner message: "Florida needs ethanol." At the 2008 Iowa event, an ethanol-powered motorcycle driven by cable television' s "American Chopper" star Paul Teutul Jr. circled the seventh-eighth-mile track before the IRL race. A favorite among children, "Edgar" the ethanol mascot also appeared at races. The ethanol industry and Indy Racing League relationship was reciprocal; ethanol advertisements aired throughout television coverage of IRL races. The industries co-sponsored pump-side promotions in which drivers, such as Jeff Simmons, and governors, such as Jim Doyle, Kathleen Sebelius, and Jennifer Granholm of the corn-producing states of Wisconsin, Kansas, and Michigan gathered at gasoline stations, which offered much lower promotional prices of ethanol.[47]

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[46] As is the case with NASCAR and Sunoco, the IRL has traditionally had an exclusive agreement with a solitary fuel supplier per season. Mike Rasor, "Racing Industry Speeds Ahead—IRL First to Put Ethanol in its Tanks," *Indianapolis Star*, 17 August 2006; Tim Lemke, "Indy 500's Corn Fed Cars—Ethanol Moves Storied Race Ahead of the Curve," *Washington Times*, 24 May 2007; MacTaggart, interview by author.

[47] Brant James, "Racing on Ethanol: It's all about Business for Now," *St. Petersburg Times*, 26 May 2008. Evidently the IRL was courted by the ethanol industry in the mid-1990s and again in 2001. The author attended IRL events at St Petersburg and Iowa in 2007 and 2008.

While stressing ethanol's capability as a high-performance fuel, these ambassadors touted the fuel's economical and environmental attributes, but ignored its detriments, one of which plagued the American ethanol industry since the days of the Model T. Gasoline obtains significantly better fuel economy than ethanol, and this partially accounts for the lag of ethanol acceptance in America. Burning fuel-grade ethanol at the racetrack has always been safer and more environmentally sound than gasoline, but the life-cycle of ethanol can be extremely costly, particularly the energy, water, chemical fertilizers, and pesticides required to plant, cultivate, and harvest the corn, transport it to a processing plant, and another energy has to then grind, cook, ferment, distill, dehydrate, and transport the fuel. Environmental side effects also included demands put on local water sources, including the already strained aquifers of the Midwest, by way of consumption and agricultural run-off. Although there have been improvements in ethanol production technology since the days of Henry Ford, it remained an environmentally expensive fuel to produce. Granted, most of the corn used for ethanol production was non-fit for human consumption, but at the same time, as more land was converted to the inedible corn crop to achieve Renewable Fuel Standards, less became available for food production. Global food prices increased in 2008, and the ethanol industry attracted more detractors, primarily in the political, economic, and environmental community.[48]

To date, scientists, politicians, economists, and environmentalists remain divided in the ethanol debate. Ethanol processing, producing, and transporting technology continues to improve, and as it does, the fuel seems to make more economic sense to be more environmentally friendly. One of the fuel's largest environmental vices is the fact that

[48] Browder, interview by author; Timothy Searchinger, "Use of U.S. Croplands for BioFuels Increases Greenhouse Gases Through Emissions from Land-Use Change," *Science*, 29 February 2009, 1238-1240. For a recent study on the discourse of ethanol in the United States, see Kristen Ann Chamberlain, "Environmentalism, Agrarianism, and Patriotism: Epideictic and Critical Implications of Discourse Promoting Ethanol" (Ph.D. Diss., North Dakota State University, 2007).

processing and transporting the fuel generates a tremendous amount of greenhouse gas emissions that are not necessarily cancelled out at the end of the fuel's life cycle by ethanol's advantageous burning properties and cleaner tailpipe emissions. Ethanol can be transported in pipelines much more effectively than in the past, and the industry is actively trying to transport ethanol in tanker trucks powered by biodiesel. Budding technology requires less water to create the fuel, and the ethanol industry continues to move away from fossil-fuel-powered plants, slowly shifting toward alternative sources of power, such as wind and biomass.[49]

Since large-scale ethanol plants first went under construction in the late 1970s, some plants, more than others, have benefited from new technologies. For instance, Life-line Foods of St. Joseph, Missouri, the official ethanol supplier to the IRL in 2008, has integrated technology that separates the corn kernel into three parts, extracting only the portion non-fit for human or animal consumption for fuel production. Indeed, these are small steps, but reflective of automobile racing in general, where gains are often only measured in fractions of a second or miles-per-hour. But, because the IRL and ethanol industry stressed performance in their venture, they neglected an opportunity to inform the racing community and the general public about advancing technologies within the American ethanol-producing sector.[50]

Through on-track performance, the ethanol industry publicized the fuel's biodegradable and cleaner-burning benefits, but part of the rhetoric also stressed patriotic elements associated with American-grown and produced ethanol. Emphasizing the political and financial aspects to

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[49] Richard S. Chang, "An Unconvincing Shade of Green," *New York Times*, 20 January 2008; Brant James, "Fuel Debate Hits Home in IRL, Sports Cars," *St Petersburg Times*, 22 April 2008, ; Adam J. Liska, "Improvements in Life Cycle Energy Efficiency and Greenhouse Gas Emissions of Corn-Ethanol," *Journal of Industrial Ecology*, 13 (February 2009): 58-74; Reuel Shinnar and Francesco Citro, "A Road Map to U.S. Decarbonization," *Science*, 1 September 2006, 1243-1244; Joseph Fargione, Jason Hill, David Tillman, Stephen Polasky, and Peter Hawthorne, "Land Clearing and the Biofuel Carbon Debt," *Science*, 29 February 2008, 1235-1237.

[50] Torrington, Wyoming-based Renova Energy supplied fuel for the 2007 season. Press Conference, 18 June 2008, Newton, Iowa.

this alliance, some critics claimed that the greenest element of this partnership was the sponsorship money and fuel that the ethanol industry provided the IRL.[51]

Regardless, it appeared that the IRL made a well-calculated and beneficial decision in its switch to ethanol. The move indicated a commitment to higher performance and increasing inclinations toward an environmental consciousness. The IRL also capitalized on the ethanol and agriculture connection and developed a solid schedule of successful Midwestern races in the Des Moines, Chicago, Kansas City, Fort Worth, Milwaukee, Detroit, Columbus, and Louisville markets. Ethanol represented the Midwest and corn—racing and regionalism linked stronger than ever—true Americana—ethanol-powered, open-cockpit racecars racing in the heart of corn country at the Indianapolis 500, held every Memorial Day weekend.[52]

Although the Indy Racing League mandated a series-wide use of ethanol fuel, there was another obvious, but less publicized, shift toward a green racing conscious in 2007. That year, the American Le Mans Series (ALMS), mandated an ethanol blend for most of its competitors (The series has limited uniform fuel regulations). The series was based just outside of Atlanta and well outside the "ethanol belt," and races were held in traditionally non ethanol-producing states, such as Georgia, Connecticut, and California thereby more widely promoting the fuel.[53]

Although the ethanol industry also collaborated with ALMS, this affiliation was markedly different in the fact that the ALMS featured recognizable street brands, such as Corvette, Acura, Audi, and Porsche. These were high-performance vehicles that raced solely on temporary street

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[51] Greg Dolan, telephone interview by author, 6 March 2009, in possession of author. Indy Lights, the Indy Racing League's major support division continued to use methanol power.

[52] Liz Clarke, "IndyCar Makes Switch to Ethanol," *Washington Post,* 21 March 2007; Walter Elliott, "Ethanol Finding a Place in American Auto Racing," *Area Auto Racing News,* 14 November 2006, B-15; Michael Smith, "IndyCar Driving Home Message for Ethanol," *Street and Smith's Sport Business Journal,* 12-18 March 2007, 7; Dean Broadhead, "Indy Car Series Fuels Consumer Interest in Ethanol," *AgriMarketing,* April 2007, 36-37.

[53] In 2007, the Audi team used diesel.

circuits or permanent road courses that featured left and right turns, as well as elevation changes. This type of racing translated more directly to commercial automotive technology more visibly than oval-racing series, just as was the case in the earliest days of racing.[54]

In 2008, in an effort to further develop a green consciousness, and permute the fuel's performance in a classic American muscle car, the ALMS Corvette team burned E-85 fuel derived from cellulose. This type of ethanol was made out of waste products or inedible biomass such as corn stalks, orange peels, and switch grass. However, there was little infrastructure in place for the production of cellulosic ethanol (although it is now on the rise in the United States). According to University of Florida scientist Lonnie Ingram, cellulosic ethanol has a positive energy balance of about 85, (the remaining 15 percent is the energy required for production (growing, harvesting, transporting, power). Corn conversely has a positive energy balance of approximately 15 (though this number can vary). As stated earlier, to determine how green a particular type of fuel is, one must account for the entire life cycle of a particular batch of ethanol, beginning with land selection and the planting of seeds and ending with engine combustion and tailpipe emission.[55] As one set of scientists have claimed, "sustainable biofuel production systems could play a highly positive role in mitigating climate change, enhancing environmental quality, and strengthening the global economy, but it will take sound, science-based policy and additional research effort to make this so."[56] Indeed, some of the "greener" technologies of today could, in fact, become the green technologies of tomorrow.

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[54] Clayton Triggs, interview by author, 1 April 2007, St. Petersburg, Florida, in possession of author. Paul Drayson, interview by author, 3 October 2008, Braselton, Georgia, in possession of the author; Oliver Gavin, interview by author, 4 October 2008, Braselton, Georgia, in possession of the author.

[55] "Eli Kintisch, "The Greening of Synfuels," *Science*, 18 April 2008, 306-308; Robert F. Service, "Eyeing Oil, Synthetic Biologists Mine Microbes for Black Gold," *Science*, 24 October 2008, 522-523; Joseph Kays, "Waste Not Want Not," *Explore*, Summer 2007, 10-15; Browder, interview by author.

[56] G. Philip Robertson, "Sustainable Fuels Redux," *Science*, 3 October 2008, 49-50.

Racing reflected this notion and it is clear that before there is green racing there first must be "greener" racing. Without question, American motorsports—some types of racing more than others—became more proactive than reactive to environmental and ecological forces over the last few years. In 2008, the Corvette team's E-85 cellulosic ethanol was produced from Black Hills National Forest waste (undergrowth, needles, dead trees) that originated primarily from Ponderosa Pine trees. A hybrid car was slated to compete in the series the following year. The sport as a whole has become more environmentally conscious, but its shade of green remained contingent on the entity, type of vehicles, varieties of fuel and lubricants used, noise abatement measures, and, perhaps most of all, track location.[57]

Green rhetoric aside, the Indy Racing League and American Le Mans Series proved what was known one hundred years ago, that ethanol is a high-performance fuel. Motorsports remains an automotive laboratory. In the 2008 St. Petersburg Grand Prix, ALMS raced on Saturday and the IRL on Sunday, and these street races indicated that the purposes and spectacle of racing on municipal, urban streets, where driver skill, mechanical savvy, and brand superiority were at stake, was strikingly similar to that long-ago Chicago race of 1895.

If the Homestead-Miami and New York City examples are any indication, ecological factors will play a rising role in how this form of American recreation sustains itself in the years ahead. With gasoline prices eclipsing four dollars per gallon in 2008, more intense criticism lurks on the horizon. Racers have voiced their concerns about fuel prices. If fuel continues to rise in price many will no longer have sufficient funding to compete. This, in turn, could lead to

[57] Paul Ferriss, "LMS Goes Green with Alternative Fuels," *Globe and Mail*, 15 May 2008; Nate Ryan, "Objective is to Win, but Le Mans Teams also Shooting for Efficiency," *USA Today*, I3 October 2008; Dan Anderson, "Ethanol Cocktails," *Speedway Illustrated*, July 2004, 86-87; Tony Fabrizio, "ALMS, IRL go green with Alternative Fuels—St Pete Race a Showcase," *Tampa Tribune*, 3 April 2008; Bruce Ritchie, "Liberty Shopping $38M Ethanol Plant Proposal," *Tallahassee Democrat*, 25 January 2008.

the closure of more tracks. Fans may no longer be able to afford the gasoline (or ethanol) required for the drive to the track on a Friday night, just as race teams will not have enough money to fill up the tanks of their racecars and transporters.

Yet some sports have a life expectancy and are dying slowly. Bowling is one such example. However, dying at an even slower pace than bowling is grassroots auto racing. Every year there are fewer American racing facilities than the year before, participation becomes more expensive and environmental and ecological factors impinge, sometimes with fatal results, on the sport. This is the "stuff" scholars will address in the years ahead. Quite simply, auto racing has an unclear and uncertain future, and it is not social, cultural, or political factors but the environment that will dictate where, when, and how the sport accelerates or stalls. But rest assured, whether in the city or in the country, on asphalt or on dirt, men and women will be racing automobiles for many decades to come.[58]

[58] "Earth First," *Racer*, May 2007, 6; Alejandro J. Martinez, "For NASCAR Drivers, Gas Price is Often just a Drop in the Bucket," *Wall Street Journal*, 31 May 2005; Norm Froscher, "The High Cost of Fuel," *Stock Car Racing*, January 2006, 14; Jerry F. Boone, "The Woes of Grassroots Racing," *Speedway Illustrated*, April 2007, 12-13; Nate Ryan, "Running on Fumes," *USA Today*, 22 December 2008.

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