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**TITLE: Are There Lessons for Canadian Foresters Lurking
South of the Border?**

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DOES FORESTRY “STUFF” HAPPEN FIRST IN THE UNITED STATES?

Are there lessons for foresters in Canada lurking south of the U.S./Canada border? I think that the answer is a resounding “yes.”

Why would I say that – and why should you care?

I think that a review of the history of forestry – and natural resources management in general – in the United States reveals a general pattern that can provide Canadian foresters some insights as to what might be in their future. It seems that the same patterns emerge in both countries – but, for some unknown reason, they frequently first emerge in the United States. Those who have a preview of what might be the future can, to some degree, determine the ultimate validity of that preview.

My message for today is to ask you to look south and study what has happened in the United States in terms of the management of forested lands in public ownership. The changes over the past two decades have been dramatic. Some of those events are already unfolding in Canada with others, I think, well on the way. It might be well for you to ask why those changes took place south of the border. Then, consider if you wish to court a similar situation in Canada.

If your answer is “yes,” continue on course. If the answer is “no,” consider the changes in the *status quo* that can be made which might alter the course of events to one more to your liking and, more importantly, to the liking of the majority of the citizens of your great Nation.

ADAGES TO HEED

Though there are significant differences between the forms of government in the United States and Canada, there are also significant similarities. It is well to note three political adages that foresters in the U.S. should have known and heeded. Foresters were too certain of their positions of prestige and authority and, evidently, felt themselves above the messy realities of functioning over the long term in a democracy.

These are:

- 1.) In the end, there are professional prerogatives that will not exist unless sanctioned by the people at large;

- 2.) Decisions are, over the long term, determined by the majority of the minority of people who care deeply about an issue;
- 3.) Then, in the democratic process, decisions are determined by those who show up.

Consider this. Twenty or so years ago, foresters were among the most respected and trusted professionals in the United States. Sadly, that is no longer so.

Then, consider this. Twenty or so years ago, the U. S. Forest Service, staffed primarily by dedicated foresters and engineers, was widely acclaimed as the best in the United States government's stable of agencies. Sadly, that is no longer so.

What the hell happened? Did foresters wake up one morning and begin taking “evil pills” and commence doing things to the land and to the people that they had not previously done? I don't know about the pills, but we did begin to do things that we had not done before (at least not at large scale) - including things that foresters themselves had, in an earlier period, coached the public to consider the personification of careless greed.

CLEAR CUTS PRODUCED A CLEAR MESSAGE

Foremost among these was the increasing practice of even-aged forest management embodying clear-cutting, seed-tree, and shelter-wood regeneration cuts as harvesting techniques. The negative aesthetic effects of these practices were magnified by the desire for maximum economic efficiency of road construction and timber harvesting that led to larger and larger cutting units. A view from the sky revealed an ever-increasing network of roads connecting a patchwork of clear cuts. I have concluded that only a forester or a wildlife biologist can see the beauty and potential in a clear cut – particularly a clear cut that is large and square and on steep ground within sight of towns and roadways.

This was coupled with the decision, driven by considerations of economic efficiency and the specter of an impending “timber famine” to convert “decadent, stagnate, biological deserts” of late-successional (“old-growth”) forests to young, vigorous, fast-growing, forests – often of selected single species. These stands – or at least many of them – were, then, to be managed in a semi-agricultural fashion to maximize growth on selected trees to yield maximal economic benefits.

In turn, these forests would be managed, on a sustainable basis, to provide economic and social stability for resource extractive communities, and provide the raw materials for a nation growing in both numbers and affluence. The “health” of these forests— i.e., the protection of investments in forestry and the assurance of the desired outcome – would be assured by techniques prescribed by well-trained foresters such as applications of pesticides and fertilizers, sanitation cutting, fire control, and thinning to remove less desirable trees and assure appropriate spacing to maximize growth on the remaining trees.

Further, so far as wildlife and fish were concerned, the forester's mantra was, far too often, that “good forestry is good wildlife management.” That chant – repeated over and

over – was widely accepted. Foresters clung tenaciously to that adage long after the emerging science clearly showed otherwise and the definition of wildlife extended beyond species avidly sought by hunters to include all species. Retention of biodiversity became a concern and foresters were forced to modify their objectives, and management, to deal with threatened or endangered species.

INTENSIVE FORESTRY AND PUBLIC LANDS – A BAD COMINATION

So long as these intensive practices were confined to private lands, there was comparatively little outcry from the public. It was, when after decades of custodial management, the public lands were brought on-line as major producers of timber (circa 1950) that problems between foresters and other resource professionals and the public began to appear full blown in the public arena. But, foresters and the Forest Service paid little attention to the more and more frequently expressed concerns. We were, after all, the professionals – foresters at that – and we had marching orders from the political system to, at long last, put what Gifford Pinchot called “practical forestry” – i.e., forestry that made money – into practice.

By the 1970s, the Forest Service and the Bureau of Land Management, were increasingly applying “industrial strength forestry” to the public lands – low elevation high site stands first. The annual cut built rapidly toward 13.5 billion board feet per year from the national forests alone. Throughout the 1970s, at least partially stimulated by the public's aversion to accumulating acreage of pristine forests that had been subject to roading and clearcutting, one environmental law after another was placed on the books including:

- National Environmental Policy Act;
- Federal Advisory Committee Act;
- Endangered Species Act;
- Forest and Rangelands Renewable Resources Planning;
- Freedom of Information Act;
- Federal Land Policy and Management Act;
- National Forest Management Act; and
- 42 other Acts relating to public land management.

It is well to understand that it takes a considerable time for public will to be translated into law. Then, there is a considerable lag time between enactment of law and the impact of that law, especially in the interactions of law, to become obvious in terms of management actions.

In spite of the growing body of law that clearly indicated a building public and political concern with the environment – and dissatisfaction with what foresters were doing – public land management agencies continued on course. The focus was on the enhanced production of wood using the most economically efficient models to guide management – particularly in terms of harvesting and stand regeneration. The agency professionals, in

spite of the building body of environmental law that were aimed at prescribing a more ecologically sensitive approach, were pressed by their politically appointed overseers toward higher levels of wood production.

One wonders what the public reaction (which was already building to a vigorous backlash) would have been if the Reagan Administration had achieved what it really desired. Forest Service officials were brought “on the carpet” and read to from the Bible about being “slothful servants” and given the target for the ongoing planning operations to designate an “annual sale quantity” of 25 billion board feet per year of wood from the national forests, essentially double the 13.5 billion board feet/year that finally emerged from the planning process.

A potential annual sale quantity of 12-14 billion board feet per year emerged from the planning process after continuous pressure from elected officials on planners to reconsider draft forest plans to increase the potential annual cut. And, many Forest Service professionals believed that though it might be possible to produce that much timber in a sustainable fashion through intensive silvicultural practices, it was equally clear that conflict with the environmental laws and citizens increasingly concerned about the environment was inevitable.

When, in order to boost potential timber harvest, commercial forestland was defined as land capable producing a minimum of 20 cubic feet of wood per acre per year, it was obvious that significant environmental effects and deficit timber sales lay just over the horizon. And, clearly, that conflict would preclude meeting the planned targets for wood yields over the longer term.

The plans simply promised too much in terms of wood to be harvested and underestimated the political/legal ramifications of associated environmental impacts. Most significantly, it was assumed that activities required to meet those harvesting goals would be socially acceptable, possible under applicable law(s) and fully funded by Congress. Those assumptions were to prove, individually, to be wrong, wrong, and really wrong.

DROPS IN TIMBER PRODUCTION FROM PUBLIC LANDS UNRELATED TO THE PARTY IN POWER

And, contrary to common belief (which lays the disintegration of the wood yield from the national forests at the feet of the Clinton administration), the cut from the national forests dropped from 13.5 billion board feet per year to approximately 3.5 billion board feet per year during the Presidencies of Ronald Reagan and George Herbert Walker Bush – a decline approaching 80 per cent. From then until now, the annual harvest has dropped another 1.5 billion board feet per year. The plethora of laws and regulations, agency turf wars, and a barrage of court cases – and money losses, the costs of taking any management action soared, making more and more timber sales into “deficit sales.” At this point there are questions, serious questions, being asked if there should be a timber program on the public lands in the United States. Or, perhaps, the public lands should be turned over to the States or sold into private ownership.

LESSONS THAT EMERGE

There are lessons here. Once the citizens of a democracy realize that they – in the final analysis – are the owners of the public lands, they will seek an increasing role in the management of those lands. Further, if the concerns of these citizens are “blown off” by professional land managers and politicians, they will respond by organizing to magnify their political impact through educational efforts and direct political involvement.

The potential of citizens with environmental concerns to organize, raise money, and exert political influence proved stunning – and quite a shock to old line natural resource managers. In fact, citizens concerned about the environment have become so formidable that some observers consider them, collectively, as a growing industry in their own right – the “conflict industry.” In the U.S., this impact includes ever increasing environmentalist participation in the political process (i.e., influence of elections and legislation), dissemination of information (some might say propaganda), demonstrations (sometimes involving civil disobedience and even terrorism), and legal actions against federal and state land management and natural resource management agencies. Some observers, commenting on the management of public lands in the United States, have declared the environmentalists as victors in a 30-year war. But now, not knowing how to deal with victory, they wander about the old battlefields bayoneting the wounded. The traditional resource-based industries, unable to come to grips with defeat, hold political ghost dances to bring back the “good old days.”

Now, given their victories related to public land management both federal and state, those of the environmentalist persuasion are increasing their focus on private lands through such avenues as state-by-state “forest practices acts” which are becoming more prevalent and ever more restrictive as time passes.

The lesson is that there is a rise in environmental movements that seems pervasive in western democracies – most noticeably in the United States. The building swell in environmentalism in Canada is well underway and is under-girded by a full understanding of the rise of the environmental movement in the United States and even involving some of the moxie veterans of those conflicts. It is likely that foresters in Canada have two choices in dealing with this emerging fact of life in the realm of natural resources management – try to ignore the environmentalists, or, or at least, marginalize their impact through political machination or accept the legitimacy of their concerns and their rights to be concerned and politically active.

In the first course of action lies an increasingly contentious battle with significant defeat, with related loss of prestige and authority, a distinct possibility – even a probability. In the second course of action lies some opportunity to heed the age-old admonition, “Come, let us reason together” and come to reasoned adjustments in management practices thereby heading off intensified conflict and increased government intervention.

It is my understanding that in Canada it is not a prerogative of citizens to sue the Crown to compel government agencies to comply with applicable laws. However, all of the other avenues delineated above are already taking root in Canada and are growing. My bet is that environmental concern and citizen involvement in forestland management will continue to grow, and quite rapidly. I would guess that the environmental movement in

Canada has just reached the point on a sigmoid growth curve that forecasts significant growth in the next decade.

POLITICS/DEMOGRAPHY AND THE ENVIRONMENTAL MOVEMENT

The growth of the environmental movement in the United States has centered in urban areas – i.e., where the people, and certainly the relatively affluent and educated, are concentrated. Such concentration in urban areas is even more pronounced in Canada. Environmental activists in urban areas have, by and large, no roots in rural areas and are relatively insensitive to the human consequences of alterations in traditional levels and kinds of resource extraction. As urban populations and concentrations of wealth and influence increasing dwarf those in rural populations and connections with rural life styles diminish, the political “clout” of and general political interest in rural areas declines even faster.

It is well to remember that, in the United States, the Federal Government has a far stronger role *vis a vis* States (Provinces) than it does in Canada. Public lands are under the control of the Federal Government. States have essentially no role in their management outside of setting regulations for hunting and fishing. This effect is magnified by the concentration of public lands in the western states that have relatively low populations. Elected representatives from those States are more sensitive to declines in resource extraction than their counterparts from other more populous States. But, after the dust settles, these elected officials are without much influence in the arena of the management of public lands. And, growth in these western states is double the national rate. Further, growth in counties that contain national forests is twice the rate of the western states as a whole. One can safely bet that these demographic shifts are not the result of potential for enhanced production of wood from the national forests. These shifts are, more likely, related to quality of life issues.

In Canada, where the Crown's Lands are managed by the Provinces, it seems likely that the management of those lands will – as influenced by environmental concerns – play out on a Province by Province basis. The relatively densely populated Provinces with more urban populations that are more affluent per capita and less dependent on natural resource extraction and processing will feel the surge in environmental concerns first and most intensely. Those Provinces will likely respond to environmental concerns first, and most significantly, with alterations to “industrial strength forestry” and with establishment of “reserves” for various purposes. The impacts on timber yields and employment in the forestry segment of the economy will be significant and will increase with time. That already seems to be playing out. That will, in turn, likely reduce the amount of wood surplus to internal needs and reduce the amount of wood available for export.

ATTENTION TO PUBLIC OPINION – FIRES AND MISFIRES

In the United States, efforts by natural resources professionals, including foresters, to educate or inform the public relative to natural resources issues were directed primarily to those who were active in natural resources management or those who worked and lived in rural areas. Lesser, much lesser, efforts were directed to urban populations where the

vast majority of the people had no direct connection with forests or forest management activities and even less understanding.

Environmentalists, in contrast, astutely directed educational, organizational, and fund raising activities toward people in urban areas and focused their actions on resource management activities in rural areas. In other words, concerned citizens in urban areas could be relatively easily enticed to help engender adjustments in forest management in rural areas as they were essentially very confident (which was unjustified) in their understanding of the situation, and immune from the consequences of their actions. This immunity, even in the price of wood related products, was assured when Canada stepped forward to supply the needed raw materials at the same or lower prices. Predicted economic consequences of curtailing wood production from national forests never occurred due to importation of cheap wood, mostly from Canada. Evidently, the U.S. was rich enough to export both environmental and economic opportunities and costs – again, largely to Canada.

The moral or ethical ramifications of shifting both environmental consequences of forest harvesting and the economic opportunities from less affluent areas of the United States to another nation have yet to become a significant national political issue. The impact is related to scale with only rural areas absorbing a significant impact. That may change with the advent of serious, prolonged recession and war.

The lesson to be learned is that educational and informational activities related to forestry matters should be inclusive of citizens who reside in urban areas and whose interests may be more in water quantity and quality, recreation, fish and wildlife, and aesthetic values than in the production of wood and wood fiber. If it can be expected that, ultimately, in a democracy, the majority will likely have its way on the management of public lands, it is important that the majority have some real understanding of the situation at hand if intelligent decisions are to result.

ADDRESSING FOREST MANAGEMENT THROUGH LAWS/LEGAL SYSTEM

The plethora of laws, and regulations issued pursuant to those laws, that bear upon public land management in the United States have evolved to become in combination a significant barrier to expedient management action. These laws have interacted with an ongoing series of court decisions to produce incredibly complex and burdensome processes that must precede completion of planning and institution of specific management actions. In combination, these ever more elaborate processes have essentially brought management of those lands to a standstill – particularly in terms of silviculture and timber harvest.

In addition, these processes are both increasingly time-consuming and expensive to execute. These laws and regulations, and associated processes and legal challenges, resulted from the efforts of an organized minority who were and are deeply concerned with the intensification of the management of the public lands and the associated environmental and aesthetic costs, and who felt excluded from the inner circles that influenced management decisions. Foresters were stunned when they emerged from this

conflict with a “bunch of amateurs” with their reputations, and professional prerogatives, much depleted.

There is a lesson here. Foresters need to adopt management approaches that are more sensitive to such objectives to maintenance of biodiversity, fish and wildlife, sustainability of ecologically functional forests, and aesthetic values.

Then, foresters need to assure that their enhanced sensitivity to these concerns and objectives and their achievements in addressing them is known and appreciated. More than that, foresters must go beyond reluctant concessions and become leaders in surfacing and meeting these objectives. Accelerated voluntary acceptance of “green certification” programs by government, corporations, and foresters could serve as a means to demonstrate that sensitivity and sincere dedication to achievement of those goals. Such could forestall realization of the forester's nightmare of a tangle of environmental legislation and the rules issued pursuant to that legislation (and enforced) by an array of agencies.

In order to make those new approaches function well enough to forestall legislation, it will be essential for foresters to broaden both their views of what good forestry entails and to consider those concerned about “environmental effects” as constituents and allies as opposed to antagonists.

COMMUNITY STABILITY AS A GOAL OF FOREST MANAGMENT

A the traditional policy of public land management agencies in the United States has been the establishment and maintenance of economic and social stability of resource dependent communities – particularly of those that are geographically isolated. Part of that effort included 50-year timber sale contracts with corporations in Alaska and the establishment of “Sustained Yield Units” which melded national forest and private lands into self-contained working circles in the Pacific Northwest.

In the United States, the political acceptability of industry/government (both formal and informal) partnerships in management of public forestlands has declined steadily over the past 50 years - and precipitously over the past decade. Long-term arrangements between the Forest Service and Corporations for management of extensive tracts of land have been terminated - sometimes by mutual consent. These arrangements, though instituted for what seemed to be good and sufficient reasons, came to a point where they were, almost universally, considered odious by both the citizenry and elected representatives as a whole. These arrangements have, one after the other, been terminated. Those that remain in place are under increasing attack.

It seems likely that the long-term management arrangements between corporations and government entities for the management of Crown Lands in Canada will be increasingly questioned on both environmental and economic/ethical/philosophical grounds. The on-going and rapidly evolving “flap” over the imposition of significant tariffs and taxes on wood products imported into the United States from Canada seems to be clearly related to the corporate/government land management relationships common in Canada.

The issue is camouflaged in rhetoric that plays on such words as “unfair subsidy” of the wood products industry by the government in Canada resulting in “unfair competition” for U.S. producers. Oddly, this was much less of an issue when 13.5 billion board feet a year was being cut on national forests in the United States. Environmentalists considered those timber sales as a subsidy to the wood products industry in the United States. These tariffs and taxes are significant in both amount and impact. The initial duty was imposed in August at 19.3 per cent and boosted last week by an additional 12.6 per cent for a total of 31.9 per cent! And, it could get worse.

The U.S. National Association of Home Builders has estimated that these actions will add about \$1,500 to the price of a new home in the United States. The Canadian wood products industry estimated that the first tariff imposed would cost 15,000 jobs and the second would have an even higher cost - a total of over 30,000 jobs.

Justified or not, whether politically motivated or not, this action from Canada's number one trading partner may stimulate reconsideration of the relationship between corporations and government in the long-term management of Crown lands. “Subsidies” are a very tricky question in public policy, related to natural resource extraction from public lands. To the extent that subsidies exist, the operative question becomes that of evaluation of the consequences of the subsidy. Clearly, the efficiency of “subsidies” in providing jobs in the wood products industry has nose-dived over the past several decades due to dramatic improvements in technology that have routinely replaced people with machines. Obviously, over the past decade in the United States, such arguments for maintaining timber production from public lands have lost political effectiveness as the amount of raw material required per job provided has continued to climb and even accelerate. That trend is continuing.

Stability as a management objective for public lands has essentially collapsed in the United States, in reality if not in rhetoric, as it became more and more obvious how difficult that was to achieve. It became clear that the following factors (among others) can be dramatically destabilizing:

- Elections;
- Court Cases;
- Budgets;
- Loss of management options (e.g., Chlorinated Hydrocarbons, for insect control, clearcutting, and harvest of old-growth forests);
- Insect and disease outbreaks;
- Fires;
- Technology developments;
- Hurricanes;
- Markets;
- New Products;

Wars;
Recessions and depressions;
Listing of threatened or endangered species;
Water quality;
Air quality;
New scientific information;
Legislation;
Changes in public opinion;
Demographic shifts.

And, even worse, these factors do not come to bear one at a time. They can and do come in bunches – much like bananas.

THE SHIFT TO “ECOSYSTEM MANAGEMENT”

The accumulation of effects of adjusting plans to accommodate “recovery plans” for a sequence of species determined to be threatened or endangered have forced a shift to ecosystem management approaches which is inclusive of these factors for use in assessment and planning:

1. Dramatic increase in scale;
2. Use of longer times frames and consideration of the dynamic nature of ecosystems;
3. Proposed management to be framed within the confines of the range of natural variability;
4. Considerations across ownership and political boundaries;
5. Consideration of the satisfaction of human needs and desires.

Oddly, it took a very long time for foresters in the United States to come to grips with the stated purpose of the Endangered Species Act, which is – “the purpose of this Act the preservation of ecosystems upon which threatened or endangered species depend.” I.e., “ecosystem sustenance” was the intent of the act.

An ecosystem management approach is likely to prove far superior and less chaotic than a series of individual recovery plans for species determined to be “threatened” or “endangered,” imposed at varying intervals, one over the top of the other. A general goal of the preservation of biodiversity over very long time periods in full recognition of the dynamic nature of ecosystems is apt to be more productive in the long term and much less expensive.

THE APPLICATION OF “GOOD SCIENCE”

In the United States, the demand for “good science” to be applied to forest planning and management has skyrocketed to the point that significant numbers of research scientists are being diverted to planning and assessment activities to deal with regional problems. Clearly, this points to a future need for qualified persons to handle these synthesis tasks. Such will be expensive and force reconsideration of how such practitioners are trained. This will be an expensive proposition but, likely, an inevitable one.

But, let us be clear about what science is and is not. Science is the development of new knowledge using the scientific method. This can be likened to the production of individual bricks that are tossed on the brick pile of knowledge. Such bricks are accumulating at an ever-increasing rate.

Using these bricks to construct a sturdy platform upon which to base management has become increasingly essential work, requiring specialists of various backgrounds to work together in teams. Synthesizers of knowledge —brick masons in this analogy —are and will be increasingly in demand. As of this moment, the only training ground for endeavors in synthesis is in the arena.

I do not believe, however, that is any quick and easy salvation in science – at least in the biological sciences – to political/social disagreements. Professionals can propose alternative courses of action based on “science.” Yet, in the end, administrators and politicians will dispose on the basis of laws and social/economic/political grounds. I think that is the way it should be in a democracy. Just how life and social sciences are melded in the management of forests is a work in progress. That is apt to be a perennial process.

THE PUNCHLINE

In summary, I offer this possible lesson for foresters that may be lurking south of the border:

1. Forester’s reputations have declined as result of hanging on too long to models of management predicated on the application of “industrial strength forestry” on both public and private lands.
2. The myth of the omniscient forester as the complete natural resource manager is obsolete.
3. Forcing the application of economics based models to the exclusion of interests in biodiversity preservation, aesthetics, fish and wildlife, etc., will produce a backlash from the public.
4. Concerned citizens, if ignored, will push cures to the perceived foibles of foresters in the form of laws and regulations.
5. Close relationships, if perceived of as too close, between industry and government related to exploitation of public lands can engender resentment and backlash.

6. Perceived subsidies of industry's extraction of wood from public lands will be increasingly questioned by an increasingly sensitive public.
7. As populations become more urbanized, "better" educated, and affluent, they will be less sympathetic to the necessity of natural resource extraction.
8. Trading partners will be increasingly sensitive to questions of perceived government subsidies of natural resource extraction.
9. Stability of extractive industries is very difficult – probably impossible – to assure.
10. There is a rising "green movement" in all western democracies that is likely to grow as we come more and more to face with a finite land base and a growing human population.
11. Canadian foresters will be well served, along with the people of Canada, if they look south to see what may – and likely does – lie ahead.
12. One definition of insanity is doing the same things over and over and expecting to get a different result. Such is to be avoided.

I do not want you to think of me a bearded would-be prophet parading before you with a sign that reads – in bold letters – REPENT! Instead, I would prefer that you consider me a friend and a fellow resource professional who warns of accidents that lie ahead on the road called forest management unless you alter course. Heads up!