

Refining the Management Assistance Program

Executive Summary

The Watershed Agricultural Council created the Management Assistance Program (MAP) in 2006 to provide forest landowners in the New York City Watershed with technical support and financial assistance to implement forest stewardship practices. Since its inception MAP has received more than 4,000 applications from nearly 300 landowners. In all, MAP has provided \$627,000 to Watershed landowners to complete 553 projects affecting 4,750 acres of Watershed forests.

But MAP has affected only a tiny fraction of both the region’s landowners and forests during this time. In the Watershed, approximately 9,400 people who own 591,000 acres were eligible. MAP has only been able to reach 3% of them in a decade. WAC routinely touts a 92% farm participation rate. Given that level of involvement, is it really acceptable that MAP reaches 3% of eligible forest landowners?

Forestry Program staff developed the following recommendations for improving MAP. These recommendations seek to focus Forestry Program resources, increase efficiency, and capitalize on the multiplying effect of peer and professional interactions.

Recommendations for Improving MAP	
#1	Redesign MAP to Take Advantage of Peer and Professional Interactions
#2	Prioritize 50 acre and Larger Properties
#3	Optimize WAC’s Investment in MAP Projects
#4	Switch from Semi-Annual Funding Rounds to Monthly Approvals
#5	Create a New Goal for MAP

When MAP was created we focused our efforts on “how” we would successfully replicate a forest stewardship practice cost-sharing program like FLEP or SIP in the Watershed. Our key assumption at the time was that these federal programs (FLEP, SIP) had already established the “why” these forest stewardship programs were necessary. After ten years we have largely succeeded in replicating these federal forest stewardship programs in the NYC Watershed. This document attempts to explore the “why” by re-examining MAP’s goal. In addition, this document reviews current MAP procedures in an effort to identify improvements in effectiveness and efficiency. One thing is certain, MAP does not need an overhaul or a “re-imagining” the way the WFMP Program did. Rather, with a few tweaks and a new focus MAP can become an even more effective program.

Background:

The Watershed Agricultural Council's (WAC's) Forestry Program created the Management Assistance Program (MAP) in 2006. MAP's goal at that time was to provide landowners with technical support and financial assistance to help them complete the stewardship activities in their Watershed Forest Management Plans (WFMPs). In the ten years since, MAP has largely succeeded in its goal. In all, MAP has provided \$627,000 to Watershed landowners to complete 553 projects affecting 4,750 acres of Watershed forests.

MAP Accomplishments: 2005 to Present	
Timber Stand Improvement	4,000 acres
Wildlife Enhancement	300 acres
Invasive Plant Control	400 acres
Riparian Improvement	15 acres
Tree Planting	35 acres
Total	4,750 acres

Since its inception MAP has received more than 4,000 applications from nearly 300 landowners. This is 22% of the total eligible landowners who completed a WFMP for their property. 88% of the landowners who submitted applications received approval for funding for at least one MAP practice, and 77% completed at least one practice.

MAP Applicants and Participants: 2005 to Present		
	MAP Practices	Individual Landowners
Eligible Landowners (WFMP holders)	-	1,030
Applications	4,028	298 (22% of eligible)
Approved Applications	685	263 (88% of applicants)
Completed Applications	556	231 (77% of applicants)

As impressive as MAP's results are, the program has affected only a tiny fraction of both the Watershed's landowners and forests. In the Watershed, approximately 9,400¹ people who own 591,000 acres were eligible to receive a WFMP. MAP has only been able to reach 3% of them in a decade. If the other 22,000 Watershed landowners who own less than 10 forested acres are included, MAP's reach drops to less than 1%. You can see the same effect when you look at the land MAP has treated with stewardship practices. While 4,750 acres sounds

¹ There are 9,400 landowners with 10+ acres owning a cumulative 591,000 acres of forest. This is a conservative number because I did not include incomplete or unverifiable addresses, and it doesn't include Connecticut. (BM GIS analysis 5.24.2017)

impressive, it is just 0.7% of the 640,813² acres of privately owned forestland in the NYC Watershed.

On the WAC homepage, the organization touts 92% farm participation. Given that level of involvement, is it really acceptable that MAP reaches 3% of eligible landowners with a WFMP? The Watershed Agricultural Program (WAP) attained this level of participation in part by strictly defining what constitutes a large farm and then focusing resources on these people and their properties. The following recommendations for improving MAP have been developed by Forestry Program staff to achieve a similar outcome - focusing Program resources on the people and properties that offer the maximum benefit to WAC.

Recommendations for Improving MAP	
#1	Redesign MAP to Take Advantage of Peer and Professional Interactions
#2	Prioritize 50 acre and Larger Properties
#3	Optimize WAC's Investment in MAP Projects
#4	Switch from Semi-Annual Funding Rounds to Monthly Approvals
#5	Create a New Goal for MAP

Rationale

Recommendation #1: Capitalize on Peer and Professional Interactions

We can increase the impact of MAP by taking advantage of one of the findings of WAC's recent Conservation Awareness Index (CAI) survey: the power of peer interactions and professional connections to increase knowledge and accelerate action.

Increasing Knowledge

According to the Diffusion of Innovations Theory (Rogers 2003), people evaluate the adoption or rejection of knowledge not through scientific research by experts but through interactions with peers who have already adopted the knowledge. These peers serve as role models, whose behavior is imitated by others. While mass media channels like TV or newspaper ads are effective in creating awareness, personal channels are more effective in forming and changing attitudes and behaviors (Rogers 2003).

² 970,929 total forested acres in NYC Watershed (DEP, 2016: Land Cover Acreage and Percent in the NYC West- and East-of-Hudson Watersheds, from 2009 Aerial Data Collection) x 66% privately owned (DEP 5/16/2016 J. Schwartz email) = 640,813 privately owned, forested acres

WAC’s CAI survey results support this theory, illustrating clearly the power peer and professional interactions have for spreading stewardship knowledge (VanBrakle 2015). When landowners didn’t know peers or professionals, they scored very low on measures of familiarity and knowledge of conservation decisions like enrolling in 480-a, getting an easement, harvesting timber, and developing an estate plan. These landowners scored on average just 1 out of a possible 8 on these sections of CAI (Figure 1). By contrast, simply knowing another landowner who had even considered a particular conservation decision raised a landowner’s average score to 4 out of 8. Knowing a professional increased their knowledge further, to an average of 5 out of 8.

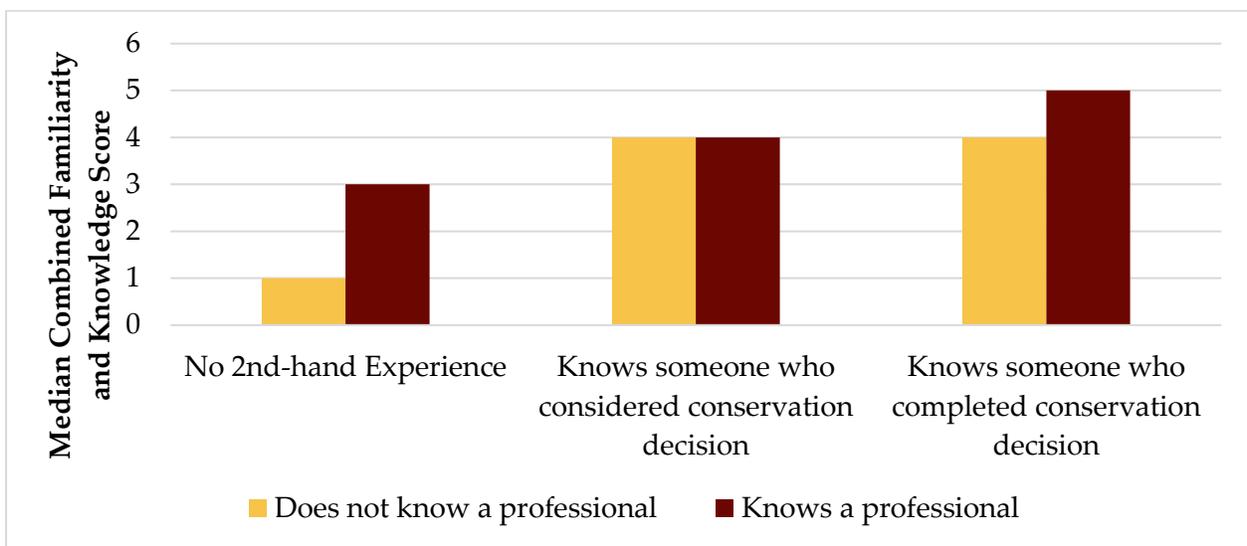


Figure 1. In the Forestry Program’s 2015 CAI survey, landowners with secondhand experience scored better on CAI’s measures of familiarity and knowledge with conservation decisions than landowners who didn’t. The increase occurred regardless of whether the owner also knew a professional.

Accelerating Action

Peer and professional interactions do more than add to landowners’ stewardship knowledge. They also motivate action. Absent peer contacts and professional connections, just 7% of CAI respondents took action on their own to carry out a conservation decision (Figure 2). By contrast, when landowners knew someone else who had done a particular practice, 35% went on to complete that same practice. If those landowners also had a professional contact, the number who completed the practice increased to 55% (VanBrakle 2015).

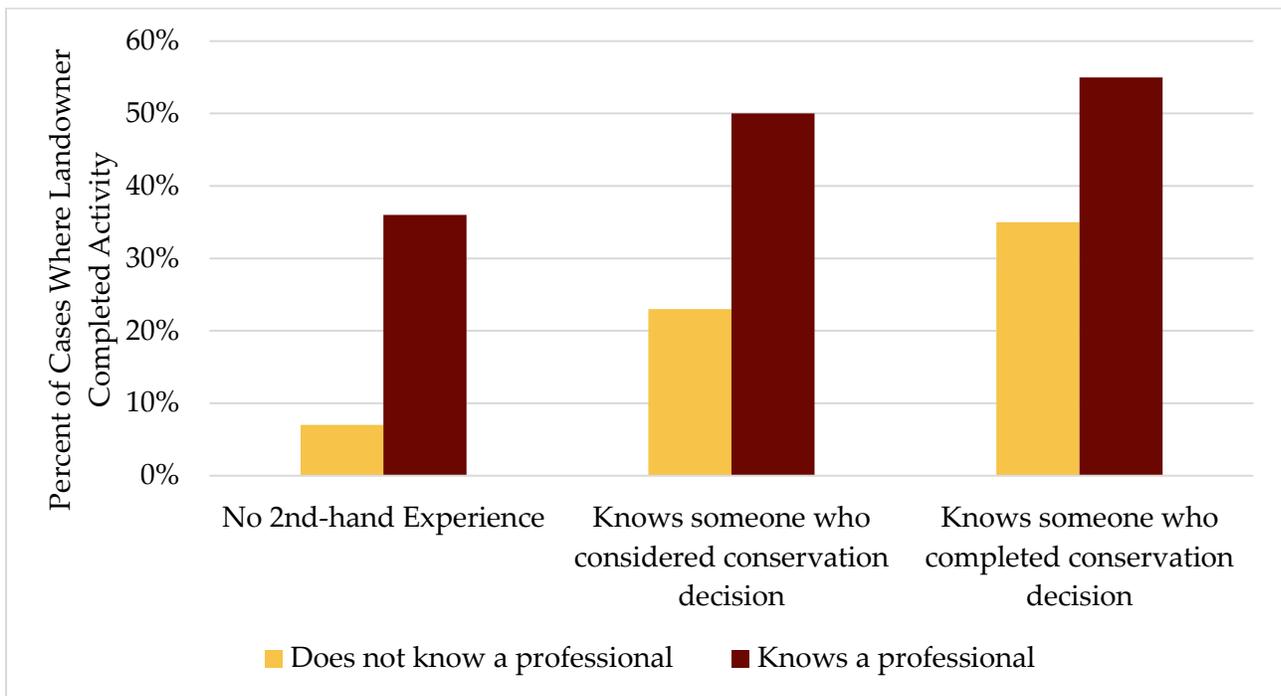
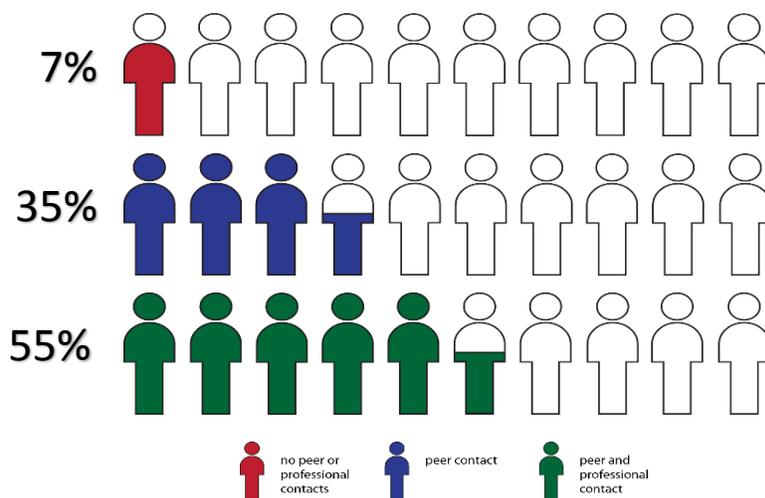


Figure 2. In the Forestry Program’s 2015 CAI survey, landowners were more likely to have completed conservation decisions like enrolling in 480-a, getting an easement, harvesting timber, or engaging in estate planning when they knew another landowner who had completed those decisions. They were also more likely to complete conservation decisions when they had a professional contact.

Catalyzing Landowner Peer-to-Peer Interactions

Updated MAP combines what WAC learned from CAI with Diffusion Theory to accelerate stewardship. By giving as many landowners as possible firsthand experiences completing forest stewardship behaviors, WAC creates more potential secondhand experiences by other landowners who don’t interact with WAC. And by facilitating the sharing of landowner experiences, WAC makes it easier for landowners lacking secondhand experience to acquire it. Ultimately, the result is that while Updated MAP may only be able to work with a small fraction of Watershed landowners, those landowners can go on to share WAC’s priority stewardship knowledge with others:

Peer & Professional Diffusion of Knowledge



MAP can provide the raw material we need to create peer connections and the sharing of stewardship knowledge. MAP creates landowner experiences by funding an average of 50 stewardship projects each year. Sharing the landowner experiences created through these MAP projects is as important as the result on the ground. Basic questionnaires and photos draw landowner experiences out of these MAP projects which WAC can help share. Facebook, the MyWoodlot Forum or MyWoodlot blogs offer avenues to introduce these peer experiences to other landowners. The following table lists the methods we can use to share stewardship experiences with other landowners.

Methods for Sharing Stewardship Experiences	
1	Stewardship Story Questionnaire
2	Digital before and after pictures
3	Facebook posts relating to the project (on a landowners personal FB page)
4	MyWoodlot forum posts
5	MyWoodlot Blog submission
6	Be a MyWoodlot contact for other landowners
7	Hang a MyWoodlot sign at you property

Remember, a key aspect of Diffusion of Innovations Theory (Rogers 2003) is that people evaluate the adoption or rejection of knowledge not through scientific research by experts but through interactions with peers who have already adopted the knowledge. Making the desired stewardship behaviors performed by one landowner observable to another can increase the

adoption of the behavior. Up to this point WAC has done a great job encouraging stewardship behaviors through MAP. But these experiences exist in the middle of the woods in the sparsely populated rural NYC Watershed. This makes the stewardship practices and the landowners who perform the stewardship behaviors almost unobservable to peer landowners. Helping uninitiated landowners interact with stewardship behaviors and the landowners who performed them plays a vital role in catalyzing more stewardship in Watershed forests.

MAP Redesign Recommendation #1: Redesign MAP to Take Advantage of Peer and Professional Interactions	
1.a	Expand MAP eligibility to landowners owning 10 or more acres of forestland in the NYC Watershed. Staff recommend amending MAP eligibility guidelines (page 16, 2017 Forestry Program Handbook) as follows - <i>“Any private landowner, village, town or school district holding at least ten (10) acres of forestland within the NYC Watershed is eligible for MAP.”</i>
1.b	Require a MyWoodlot profile in order to be eligible for MAP. Staff recommend amending MAP eligibility guidelines (page 16, 2017 Forestry Program Handbook) as follows: <i>“The landowner must have a MyWoodlot profile in order to be eligible for MAP.”</i>
1.c	Landowners participating in MAP will be required to share their stewardship experiences relating to their completed project. The following Guideline should be added to the MAP Procedures and Participation Requirements (page 16, 2017 Forestry Program Handbook): <i>Prior to final payment participants are required to share their stewardship experiences relating to their completed project through a WAC approved method. Landowners will give WAC permission to share their pictures and experiences with the general public. WAC staff will accommodate landowner requests for anonymity when sharing their experiences.</i>

Catalyzing Professional Connections

WAC is not unique in wanting to tap into the power of connecting landowners with professionals. In Wisconsin’s Driftless Area, the Driftless Forest Network (DFN) provides base-level stewardship information through a free printed handbook called *My Healthy Woods*. This mass media tool effectively created awareness of DFN, produced moderate gains in on-the-ground action, and made landowners more willing to agree to an in-person stewardship forester visit. However, it was ultimately that forester visit that was most effective in encouraging on-the-ground action (VanBrakle 2017).

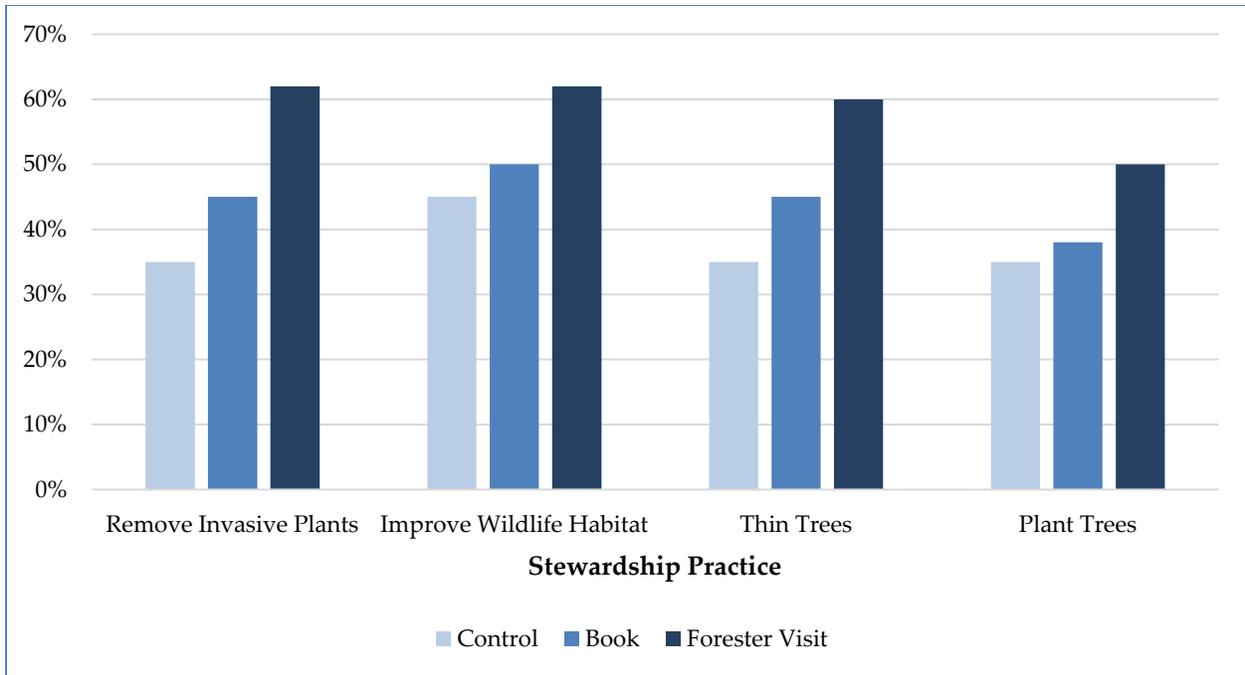


Figure 3. Likelihood of Driftless Area landowners to complete various on-the-ground stewardship projects. The Y-axis is the percent of landowners who reported they are “very” or “extremely” likely to complete the practice in the next 5 years.

Staff capacity within the Forestry Program is limited. But the success demonstrated by forester visits in the Driftless Region is compelling. Evaluations of Forest Service’s Forest Stewardship Program revealed “having a service forester walk the land with [a landowner is] the most highly valued assistance that [can] be provided” (Kilgore et al, 2007). In addition, WAC Forester site visits may become an important source of future MAP applications as these inspirational visits catalyze stewardship action. Based on this information staff recommend establishing a WAC Forester Site Visit practice for MAP. The purpose of conducting site visits is to increase awareness of WAC’s priority stewardship knowledge.

WAC’s Priority Stewardship Knowledge	
1	480a Forest Tax Law
2	Conservation Easements
3	Timber Harvesting
4	Estate Planning
5	Water Quality BMP’s
6	Economic Viability of the working forest landscape

However, given limited staff capacity for site visits and a large anticipated demand for this service staff recommend using techniques to prioritize and manage this demand. Only landowners eligible for 480a will be eligible for a WAC site visit. This will focus WAC's limited resources on the 380,000 acres of land and 2,600 landowners that provide the greatest benefit. In addition, these landowners will be eligible for site visits upon invitation only. This way WAC will be able to manage the number and locations of invites in order to balance site visit demand with staff availability. In essence, WAC will invite all 480a eligible landowners within a Watershed town to participate in a WAC site visit over the following six months. After six months the offer expires and WAC moves to another Watershed town and repeats the solicitation. WAC will repeat this process for all Watershed towns, cycling through the Watershed and providing the opportunity to landowners in a manner that can balance the demand with staff availability.

MAP Redesign Recommendation #1 Redesign MAP to Take Advantage of Peer and Professional Interactions

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|------------|---|
| 1.e | Create a WAC Site Visit practice for MAP that provides select landowners with one-on-one contact with a WAC Forester. |
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Recommendation #2: Prioritize 50 acre and larger Properties

Can opening MAP eligibility up to landowners owning more than 10 acres with a MyWoodlot profile create too much demand? If so, what can we do to manage this demand?

MAP's Capacity:

Currently we spend an average of \$57,013³ and 77% of one FTE to complete an average of 50⁴ MAP projects each year. Over the past ten years WAC has spent \$627,000 on 553 MAP projects affecting 4,725 acres (0.7%) of privately owned Watershed forests. This represents just 3% of eligible landowners with a WFMP.

How can WAC use MAP to affect the stewardship of a meaningful amount of forestland in the Watershed given the staff time and funding we have? In order to treat 1% of the 591,000

³ Average of 2006 through 2016 MAP Paid Funding

⁴ Average of 2006 through 2016 MAP Completed Projects

acres of privately owned forestland over 10 acres in the Watershed, we would need to spend more than \$780,000⁵ and 11⁶ FTE's each year over the next decade.

Costs of Treating Private Forestland via MAP		
% Privately Own Forests Treated	Budget	Full Time Employee's (FTE)
1% (5,910 acres)	\$780,000	11
5% (29,550 acres)	\$3.9 million	55
10% (59,100 acres)	\$7.8 million	110

To treat 5% of Watershed forests we'd need to spend over \$3.9 million and 55 FTE's annually. To treat 10% of Watershed forests we'd need to spend over \$7.8 million and 110 FTE's annually. MAP's capacity to catalyze forest stewardship practices is constrained by funding and the staff time it takes to coordinate and inspect projects. As demonstrated above, drastically increasing the number of MAP projects WAC can complete will require a staffing model and budget similar to the Watershed Agricultural Program (WAP). Clearly, the Forestry Program cannot expect such massive increases in funding and staff capacity. In light of this realization it is necessary to develop a method for focusing MAP resources on the landowners and properties that provide the most benefit to WAC.

MAP Participation Trends:

Ownership size and tenure correlate with the probability of participation in conservation assistance programs (Kaetzel et al, 2009). In short, people who own large properties are more likely to participate in programs like 480a and MAP. This trend is clearly visible when looking at MAP's accomplishments. The vast majority of participation (70%) and treated acres (92%) are found on the 50 plus acre ownerships. Watershed landowners decide whether or not to participate in MAP. Owners of large properties are deciding to participate at a significantly higher rate than the owners of smaller properties.

MAP also proves particularly effective when its results are viewed in the context of 480a enrollment. 49% (161) of enrolled landowners in WAC's 480a portfolio⁷ have completed a MAP

⁵ 591,000 acres x .01 = 5,910 acres; 5,910 acres x (\$627,000/4,725 acres) = \$784,274

⁶ \$57,013/ 77 % FTE = \$740.43 per 1 % FTE; \$784,274/\$740.43 per 1% FTE = 1,059.21/100 = 11 FTE's

⁷ WAC's 480a portfolio, as of 4.1.2017, includes 265 landowners and 46,514 acres verified through 480a Certificates of Enrollment in addition to 59 landowners and 4,973 acres suspected of enrollment for a total of 324 landowners and 51,487 acres. Suspected enrollment is determined based on passed participation in WAC's 480 Incentive, Upgrade, Enrollment Incentive and Update Incentives when a 480a Certificate of Enrollment number was not recorded in the Forestry Program Database. At the time these applications were approved WAC received confirmation from NYS DEC of enrollment in 480a.

practice. In total 48% (265) of completed MAP projects and 65% of the total acres treated through MAP have occurred on 480a enrolled properties.

Completed MAP Projects by 480a Status		
	480a Enrolled	480a Eligible
Landowners	161	20
Completed MAP Projects	265	123
Acres Treated	3,095	1,275

When MAP’s accomplishments are viewed in the context of 480a eligibility, 7% (181) of landowners eligible⁸ for 480a have completed a MAP practice. In total, 70% (388) of completed MAP projects and 92% of the total acres treated through MAP have occurred on 480a eligible properties.

Managing MAP Demand:

Based on our analysis of past MAP participation and the peer-reviewed literature we should expect larger landowners (>50 acres) to make up the majority of MAP participants in the future. But, however remote, the chance still exists that a large number of small acreage applicants will overwhelm MAP’s capacity. For this reason MAP should prioritize participation for landowners owning 50 acres or more. This means, in a situation where WAC is unable to provide MAP funding for everyone, we are focusing limited resources on the properties that have the potential to provide the most benefit to WAC – 480a eligible and enrolled properties.

BENEFITS

-  1. Minimal subdivision and development without purchasing property rights - keeping forests as forests.
-  2. Sustainable forest management that promotes economic viability.
-  3. Increased participation in our BMP Program - protecting water quality
-  4. Lower annual cost for the WFMP Program.

⁸ 2,600 landowners are eligible to enroll in 480a in the NYC Watershed

Updated MAP Selection Criteria

In addition to prioritizing 480a eligible properties the updated MAP selection criteria will seek to maximize the number of unique landowner participants as well as the number of new practice completions. This will ensure that we are capitalizing on the power of knowledge diffusion through peer interactions. The more landowners MAP can create with first hand stewardship experiences, the more landowners there will be in the Watershed with second hand experiences (MAP Redesign Recommendation #1). In addition, prioritizing participants who own 50 acres or more will provide a mechanism for managing the potentially large demand for MAP created by opening eligibility to more people (MAP Redesign Recommendation 3.a).

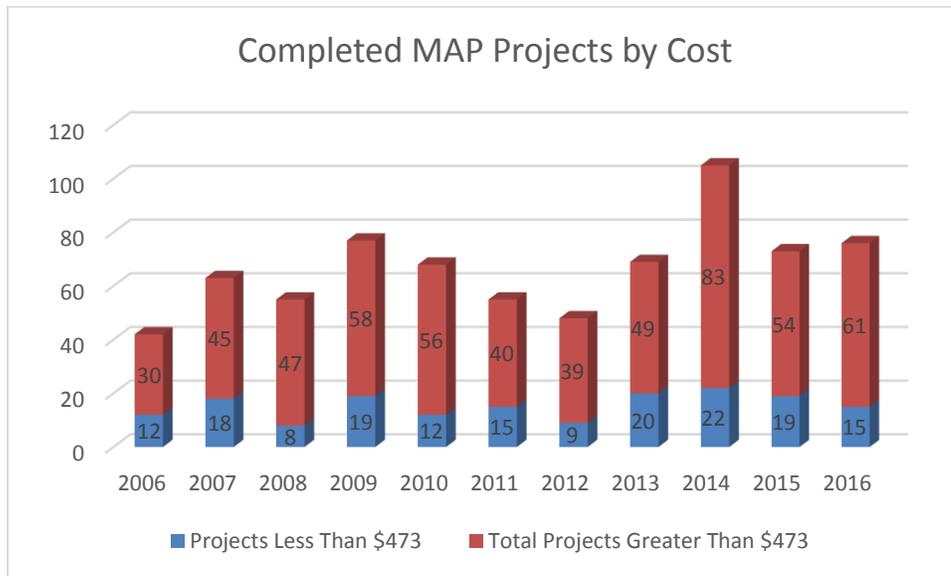
New MAP Selection Criteria		
#	Criteria	Base Score
1	New participant/ new practice	10
2	Repeat participant/ new practice	5
3	Repeat participant/ repeat practice	2
Scoring Adjustments		
1	Applicants property is 50 acres or greater	+5
2	The proposed project will address special or unique watershed protection needs	+14
3	Did not share their previous MAP experience with other landowners (repeat participants only) ⁹	-5

MAP Redesign Recommendation #2: Create New MAP Selection Criteria	
2	Update MAP selection criteria to maximize the number of unique landowner participants and the number of new practice completions while prioritizing participation on landowners and properties that provide the most benefit to WAC (> 50 acres).

⁹ This criteria will allow for applicants owning more than 50 acres who did not share their experience to get MAP funding (total score 1) in the event there are no applicants who meet the other criteria. However, this criteria will not allow an applicant owning less than 50 acres who did not share their experience (total score 0) to receive MAP funding.

Recommendation #3: Optimize WAC’s Investment in MAP Projects

Updated MAP needs to balance outcomes with the investment of Forestry Program resources. On average WAC spends \$473 to pay staff to inspect and distribute funding for a single MAP project. Over the 10 year history of MAP 32% (169) of completed projects were paid less than \$473.



In essence, WAC has been paying more to inspect a significant number of MAP projects than the projects are worth. If WAC had employed alternatives to physical inspections for low value MAP projects an average of 6% of one FTE each year could have been reallocated to increasing MAP participation or used for other Program priorities – like WAC Forester Ssite visits.

Alternative Inspection Techniques	
1	Landowners provide before and after pictures of the completed practice
2	Landowners complete a WAC Stewardship Stories form for the completed practice
3	Landowners write a blog for MWL about their completed practice
4	Landowners share pictures and thoughts about their completed practice on the MWL Forum

The need for staff to conduct inspections to verify the completion of MAP practices limits the total number of MAP projects that can be completed in a year. Redesigning practices so they don’t require an inspection to verify completion and identifying alternatives to physical

inspections will expand WACs capacity to complete MAP practices. But the benefits of alternative inspection techniques are not limited to increasing staff efficiency.

The Benefits of Alternative Inspection Techniques	
1	Save staff time that would otherwise go towards inspecting low value MAP projects
2	Provides a system for soliciting feedback from landowners that can be used to refine MAP to make it more appealing to landowners or more effective at conveying WAC's priority knowledge
3	Requiring landowners to provide pictures, blogs, social media posts, testimonials, and stewardship stories as an alternative to physical inspections gives WAC the ability to share their experiences with other landowners, catalyzing more stewardship through peer-to-peer interactions.

As a next step staff can explore the efficacy of AIT's on projects less than \$473. This means staff will use alternative inspection techniques for all MAP projects under \$473. Random spot checks will be conducted to evaluate the effectiveness of these techniques. If alternative inspections techniques prove effective the Forestry Committee can choose to expand the pool of projects eligible for AIT's by raising the \$473 cap. If they prove to be ineffective the Forestry Committee can elect to go back to inspecting MAP projects prior to payment.

MAP Redesign Recommendation #3 Optimize WAC's Investment in MAP Projects	
3.a	Staff will employ an alternative inspection technique when the total paid amount for a completed MAP project is equal to or less than \$473.

Recommendation #4: Switch from Semi-Annual Funding Rounds to Monthly Approvals

Under the current MAP, landowners can submit applications at any time, but those applications are batched into two semi-annual funding rounds on February 15 and July 15. If a landowner misses the deadline even by a day, that person must wait six months for the next round to be considered.

Since the goal of Updated MAP is to give landowners experiences with stewardship, making them wait six months for a funding round is no longer acceptable. WAC needs to encourage landowners to take action while they are still interested in pursuing a given practice. Accordingly, staff recommend that Updated MAP adopt the same funding style as the WFMP Program, and fund applications that meet all criteria on a monthly basis.

MAP Redesign Recommendation #4: Switch from Semi-Annual Funding Rounds to Continuous Approvals	
4.a	Staff recommend that MAP fund applications on a monthly basis and do away with the semi-annual funding rounds of the current MAP. The following language will replace

the first sentence in MAP Guideline 2 (page 16, 2017 Forestry Program Handbook):
“Applications will be approved on a monthly basis”.

Recommendation #5: Create a New Goal for MAP

The Management Assistance Program (MAP) was created in 2006. The goal was to provide landowners with technical support and financial assistance to help them complete the stewardship activities in their Watershed Forest Management Plans (WFMPs). But in 2012, an evaluation of WFMPs found they did not result in better water quality BMPs or more sustained yield management. In 2013 WAC decided to replace WFMPs with MyWoodlot.com and the 480a Incentives. The previous WFMP Program officially expired at the end of June 2014. Just helping landowners implement stewardship activities from their WFMP’s is no longer a valid goal. But MAP can still play a vital role.

MAP has the potential to catalyze forest stewardship among Watershed landowners. MAP can “seed” first hand experiences with forest stewardship behaviors into a critical mass of the NYC Watershed forest landowner population. Critical mass is the point at which enough individuals in a system have adopted a behavior so that the behaviors further rate of adoption becomes self-sustaining. (page 343, Rogers 2003) Subsequently, forest stewardship behaviors spread to more landowners through peer interactions, without WAC’s intervention. This process through which MAP behaviors spread among a population is also known as Diffusion Theory. The diffusion of behaviors among a population is governed by five factors:

Five Factors that define how quickly behaviors (innovations) spread	
Perceived relative advantage	What value does the new thing have when compared to the old? This is determined by target audiences. Perceived advantage is built on things like economics, prestige, convenience, fashion, satisfaction, low initial cost, saving time and/or effort, increase in comfort, an immediate reward.
Compatibility	How much effort (cost) is required to transition from the current behavior to the new one? Costs include people’s value systems, finances, habits and personal beliefs. If cost is greater than advantage, most people won’t try the innovation. The innovation must be compatible with the customers habits, beliefs, values and lifestyles.
Complexity	How much learning is required to apply the new behavior?

Try-ability	How easy is it to try the innovation? Tactics like samples, giveaways, freemium services and demonstrations make it risk-free to try new things.
Observability	How visible are the results of the new behavior? The more visible the perceived advantage, the faster the rate of adoption (A # of landowners helped ticker on the home page; # of acres enrolled in MyWoodlot ticker)

Adopting Diffusion Theory as a model for MAP comes with some uncertainty. Generally speaking, MAP practices may have a high complexity because they require more than a reasonable amount of effort to learn. Observability is likely low since MAP practices are often completed in the middle of the woods in the sparsely populated, rural Watershed. Perceived advantage may also be low because performing these practices does not address the fundamental elements of human behavior (physiological, safety) as presented by Maslow’s Hierarchy of Needs. Compatibility may also be an issue, especially with a high percentage of absentee landowners who wrestle with investing time and money in a primary and secondary residence.

In addition, the structure of the landowner population we’re working with presents unique challenges. Forest landowners do not all live in one place. They may or may not interact with each other on a regular basis. They have no way of knowing who their landowner peers are when they meet them daily life. Given these considerations, staff has opted for the most conservative estimate of critical mass - 20%.

The Number of Landowners Needed to Reach Critical Mass		
	Total Landowners	20% Critical Mass
All Landowners	35,560	7,112
> 10 Acre Landowners	9,400	1,880
> 50 Acre Landowners	2,100	420

A new goal for MAP will allow us to capitalize on the opportunity presented by integrating Diffusion Theory into MAP – the unassisted spread of stewardship behaviors among forest landowners in the Watershed. Designing a new goal for MAP starts with the

Ultimate Goal. The Ultimate Goal is the result beyond which further progress is unnecessary. Once an Ultimate Goal has been developed a Proximate Goal is developed to provide more actionable guidance. The Proximate Goal identifies intermediate outcomes that contribute to achieving the Ultimate Goal. Ultimate Goals should be bold and aspirational while Proximate Goals should be SMART. SMART Goals are especially useful because they help the Forestry Committee exercise its Fiduciary Role by setting benchmarks, measurable outcomes and deadlines for progress that can be tracked and discussed during Committee meetings.

SMART Goals	
S	Specific (simple, sensible, significant)
M	Measurable (meaningful, motivating)
A	Achievable (agreed, attainable)
R	Relevant (reasonable, realistic and resourced, results-based)
T	Time bound (time-based, time limited, time/cost limited, timely, time-sensitive)

MAP Redesign Recommendation #5: New MAP Goals	
5.a	Ultimate Goal: Watershed landowners (> 10 acres) will implement forest stewardship practices at a higher rate, without WAC intervention, than other landowners in the northeast.
5.b	Proximate Goal: A critical mass (20%) of >50 acre landowners¹⁰ in the Watershed will participate in MAP by 2025. 60 unique landowners will complete 60 MAP practices annually. (SMART Goal)

Employing the tenants of Diffusion Theory helps us identify the number of landowners (critical mass) MAP needs to reach. In theory, critical mass will help us achieve our proximate goal, a self-sustaining desire among our target audience to participate in MAP. But a key tenant of our Ultimate Goal is the implementation of forest stewardship practices in the Watershed without WAC and MAP intervention. Will a critical mass of people adopting the “participate in MAP” behavior translate into the self-sustaining implementation of forest stewardship practices among our target audience without assistance from MAP? Only time will tell, so future evaluation of MAP should explore this question.

¹⁰ Currently, 210 greater than 50 acre landowners have successfully participated in MAP (completed at least one project). This means we are 40% of the way towards achieving our 20% of > 50 acre landowners by 2025.

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