

Woody Biomass Removal Case Studies

Lessons Learned and Strategies for Success

Forest managers remove woody biomass from forests for many reasons including reducing hazardous fuels, increasing fire safety in the wildland-urban interface, restoring ecosystems, improving wildlife habitat, conducting forest stand improvement, and providing products from poles to pellets. Managers across the country on public, tribal, conservation, and private lands have utilized a wide variety of strategies for removing biomass. To help share these strategies, the Forest Guild embarked on a year-long research project funded by the Joint Fire Sciences Program. The Forest Guild has collected and presented on the internet over 35 case studies so that managers, landowners, business entrepreneurs, communities, and industry partners can easily access information to help them remove and utilize woody biomass from forests in an efficient and ecologically responsible manner.



The Guild is now analyzing the case studies to uncover specific strategies and techniques used by land managers to implement ecologically sound biomass removal. The case studies represent a broad range of project objectives, treatment techniques, and prescriptions. An advisory council of managers and scientists from different disciplines, organizations, and locations has contributed their insights to guide data collection and is now helping with the analysis. Some of the themes that have emerged from an initial review of the case studies include:

1. Multiple objectives – Woody biomass removal projects tend to have multiple objectives. Objectives such as ecological restoration, fire-risk reduction, forest-stand improvement, and habitat improvement usually are higher priorities than biomass utilization.

2. Economics – Although some biomass removal projects are able to generate a profit or at least break even, most projects must be subsidized. Contractors, utilization markets, haul distances, and the mix of removed products all affect profitability.
3. Collaboration – Collaboration, with both the interested public and contractors, is a key element in successful woody biomass removal projects.
4. Ecology – Ecological concerns about biomass removal exist, but few projects incorporate monitoring to allay those concerns.
5. Fire – Fire is a key element in biomass removal projects located in ecosystems where fire is an important natural disturbance.
6. Implementation – Many biomass removals rely on hand felling and traditional skidding operations, although machines designed for biomass removal are beginning to move from the experimental phase to everyday operations and may make future projects more efficient.
7. Regional Differences – Regional differences in biomass utilization and objectives reflect both forest type and ownership variations across the country.

For more information on this project please see <http://biomass.forestguild.org>. If you would like to share an example of biomass removal from your own work, please contact Zander Evans (zander@forestguild.org), Research Director at the Forest Guild.

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